

SEQUENCE LISTING

<110> Ruvkun, Gary
Kimura, Koutarou
Patterson, Garth
Ogg, Scott
Paradis, Suzanne
Tissenbaum, Heidi
Morris, Jason
Kowek, Allison

<120> THERAPEUTIC AND DIAGNOSTIC TOOLS FOR
IMPAIRED GLUCOSE TOLERANCE CONDITIONS

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<150> US 08/857,076

<151> 2000-08-03

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Tyr	Gly	Lys	Lys	Val	Lys	Ala	Leu	Ser	Asp	Phe	Met	Gln	Leu	Asn	Pro	
							1090						1100	1105		
Glu	Tyr	Cys	Val	Asp	Asn	Lys	Tyr	Asn	Ala	Asp	Asp	Trp	Glu	Leu	Arg	
1105							1110						1115	1120		
Gln	Asp	Asp	Val	Val	Leu	Gly	Gln	Gln	Cys	Gly	Glu	Gly	Ser	Phe	Gly	
							1125						1130	1135		
Lys	Val	Tyr	Leu	Gly	Thr	Gly	Asn	Asn	Val	Val	Ser	Leu	Met	Gly	Asp	
							1140						1145	1150		
Arg	Phe	Gly	Pro	Cys	Ala	Ile	Lys	Ile	Asn	Val						

Tyr Leu Arg Ser Lys Arg Glu Asp Glu Val Phe Asn Glu Thr Asp Cys
 1220 1225 1230
 Asn Phe Phe Asp Ile Ile Pro Arg Asp Lys Phe His Glu Trp Ala Ala
 1235 1240 1245
 Gln Ile Cys Asp Gly Met Ala Tyr Leu Glu Ser Leu Lys Phe Cys His
 1250 1255 1260
 Arg Asp Leu Ala Ala Arg Asn Cys Met Ile Asn Arg Asp Glu Thr Val
 1265 1270 1275 128
 Lys Ile Gly Asp Phe Gly Met Ala Arg Asp Leu Phe Tyr His Asp Tyr
 1285 1290 1295
 Tyr Lys Pro Ser Gly Lys Arg Met Met Pro Val Arg Trp Met Ser Pro
 1300 1305 1310
 Glu Ser Leu Lys Asp Gly Lys Phe Asp Ser Lys Ser Asp Val Trp Ser
 1315 1320 1325
 Phe Gly Val Val Leu Tyr Glu Met Val Thr Leu Gly Ala Gln Pro Tyr
 1330 1335 1340
 Ile Gly Leu Ser Asn Asp Glu Val Leu Asn Tyr Ile Gly Met Ala Arg
 1345 1350 1355 136
 Lys Val Ile Lys Lys Pro Glu Cys Cys Glu Asn Tyr Trp Tyr Lys Val
 1365 1370 1375
 Met Lys Met Cys Trp Arg Tyr Ser Pro Arg Asp Arg Pro Thr Phe Leu
 1380 1385 1390
 Gln Leu Val His Leu Leu Ala Ala Glu Ala Ser Pro Glu Phe Arg Asp
 1395 1400 1405
 Leu Ser Phe Val Leu Thr Asp Asn Gln Met Ile Leu Asp Asp Ser Glu
 1410 1415 1420
 Ala Leu Asp Leu Asp Asp Ile Asp Asp Thr Asp Met Asn Asp Gln Val
 1425 1430 1435 144
 Val Glu Val Ala Pro Asp Val Glu Asn Val Glu Val Gln Ser Asp Ser
 1445 1450 1455
 Glu Arg Arg Asn Thr Asp Ser Ile Pro Leu Lys Gln Phe Lys Thr Ile
 1460 1465 1470
 Pro Pro Ile Asn Ala Thr Thr Ser His Ser Thr Ile Ser Ile Asp Glu
 1475 1480 1485
 Thr Pro Met Lys Ala Lys Gln Arg Glu Gly Ser Leu Asp Glu Glu Tyr
 1490 1495 1500
 Ala Leu Met Asn His Ser Gly Gly Pro Ser Asp Ala Glu Val Arg Thr
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 Tyr Ala Gly Asp Gly Asp Tyr Val Glu Arg Asp Val Arg Glu Asn Asp
 1525 1530 1535
 Val Pro Thr Arg Arg Asn Thr Gly Ala Ser Thr Ser Ser Tyr Thr Gly
 1540 1545 1550
 Gly Gly Pro Tyr Cys Leu Thr Asn Arg Gly Gly Ser Asn Glu Arg Gly
 1555 1560 1565
 Ala Gly Phe Gly Glu Ala Val Arg Leu Thr Asp Gly Val Gly Ser Gly
 1570 1575 1580
 His Leu Asn Asp Asp Asp Tyr Val Glu Lys Glu Ile Ser Ser Met Asp
 1585 1590 1595 160
 Thr Arg Arg Ser Thr Gly Ala Ser Ser Ser Ser Tyr Gly Val Pro Gln
 1605 1610 1615
 Thr Asn Trp Ser Gly Asn Arg Gly Ala Thr Tyr Tyr Thr Ser Lys Ala
 1620 1625 1630
 Gln Gln Ala Ala Thr Ala Ala Ala Ala Ala Ala Ala Leu Gln Gln
 1635 1640 1645
 Gln Gln Asn Gly Gly Arg Gly Asp Arg Leu Thr Gln Leu Pro Gly Thr
 1650 1655 1660
 Gly His Leu Gln Ser Thr Arg Gly Gly Gln Asp Gly Asp Tyr Ile Glu

1665 1670 1675 168
 Thr Glu Pro Lys Asn Tyr Arg Asn Asn Gly Ser Pro Ser Arg Asn Gly
 1685 1690 1695
 Asn Ser Arg Asp Ile Phe Asn Gly Arg Ser Ala Phe Gly Glu Asn Glu
 1700 1705 1710
 His Leu Ile Glu Asp Asn Glu His His Pro Leu Val
 1715 1720

<210> 13
 <211> 139
 <212> PRT
 <213> Caenorhabditis elegans

<400> 13
 Thr Ser Gly Ser Gly Met Gly Pro Thr Thr Leu His Lys Leu Thr Ile
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 Gly Gly Gln Ile Arg Leu Thr Gly Arg Val Gly Ser Gly Arg Phe Gly
 20 25 30
 Asn Val Ser Arg Gly Asp Tyr Arg Gly Glu Ala Val Ala Val Lys Val
 35 40 45
 Phe Asn Ala Leu Asp Glu Pro Ala Phe His Lys Glu Thr Glu Ile Phe
 50 55 60
 Glu Thr Arg Met Leu Arg His Pro Asn Val Leu Arg Tyr Ile Gly Ser
 65 70 75 80
 Asp Arg Val Asp Thr Gly Phe Val Thr Glu Leu Trp Leu Val Thr Glu
 85 90 95
 Tyr His Pro Ser Gly Ser Leu His Asp Phe Leu Leu Glu Asn Thr Val
 100 105 110
 Asn Ile Glu Thr Tyr Tyr Asn Leu Met Arg Ser Thr Ala Ser Gly Leu
 115 120 125
 Ala Phe Leu His Asn Gln Ile Gly Gly Ser Lys
 130 135

<210> 14
 <211> 62
 <212> PRT
 <213> Caenorhabditis elegans

<400> 14
 Glu Asp Ala Ala Ser Asp Ile Ile Ala Asn Glu Asn Tyr Lys Cys Gly
 1 5 10 15
 Thr Val Arg Tyr Leu Ala Pro Glu Ile Leu Asn Ser Thr Met Gln Phe
 20 25 30
 Thr Val Phe Glu Ser Tyr Gln Cys Ala Asp Val Tyr Ser Phe Ser Leu
 35 40 45
 Val Met Trp Glu Thr Leu Cys Arg Cys Glu Asp Gly Asp Val
 50 55 60

<210> 15
 <211> 31
 <212> PRT
 <213> Caenorhabditis elegans

<400> 15
 Lys Pro Ala Met Ala His Arg Asp Ile Lys Ser Lys Asn Ile Met Val

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Lys Asn Asp	Leu Thr Cys Ala Ile	Gly Asp Leu Gly Leu	Ser Leu
20	25	30	

<210> 16
 <211> 72
 <212> PRT
 <213> Caenorhabditis elegans

<400> 16															
Ile Pro Tyr	Ile Glu Trp Thr	Asp Arg Asp Pro	Gln Asp Ala	Gln Met											
1	5	10	15												
Phe Asp Val	Val Cys Thr Arg	Arg Leu Arg Pro	Thr Glu Asn	Pro Leu											
20	25	30													
Trp Lys Asp	His Pro Glu Met	Lys His Ile Met	Glu Ile Ile	Lys Thr											
35	40	45													
Cys Trp Asn	Gly Asn Pro Ser	Ala Arg Phe Thr	Ser Tyr Ile	Cys Arg											
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Lys Arg Met	Asp Glu Arg	Gln Gln													
65	70														

<210> 17
 <211> 150
 <212> PRT
 <213> Caenorhabditis elegans

<400> 17															
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1	5	10	15												
Val Ala Thr	Tyr Ile Met Gly	Ile Lys Asp Arg	His Ser Asp	Asn Leu											
20	25	30													
Met Leu Thr	Glu Asp Gly Lys	Tyr Val His Ile	Asp Phe Gly	His Ile											
35	40	45													
Leu Gly His	Gly Lys Thr Lys	Leu Gly Ile Gln	Arg Asp Arg	Gln Pro											
50	55	60													
Phe Ile Leu	Thr Glu His Phe	Met Thr Val Ile	Arg Ser Gly	Lys Ser											
65	70	75	80												
Val Asp Gly	Asn Ser His Glu	Leu Gln Lys Phe	Lys Thr Leu	Cys Val											
85	90	95													
Glu Ala Tyr	Glu Val Met Trp	Asn Asn Arg Asp	Leu Phe Val	Ser Leu											
100	105	110													
Phe Thr Leu	Met Leu Gly Met	Glu Leu Pro Glu	Leu Ser Thr	Lys Ala											
115	120	125													
Asp Leu Asp	His Leu Lys Lys	Thr Leu Phe Cys	Asn Gly Glu	Ser Lys											
130	135	140													
Glu Glu Ala	Arg Lys Phe														
145	150														

<210> 18
 <211> 113
 <212> PRT
 <213> Caenorhabditis elegans

<400> 18															
Ser Pro Leu	Asp Pro Val Tyr	Lys Leu Gly Glu	Met Ile Ile	Asp Lys											

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Ala Ile Val	Leu Gly Ser Ala Lys Arg	Pro Leu Met Leu His Trp Lys	
	20	25	30
Asn Lys Asn	Pro Lys Ser Asp Leu His Leu Pro Phe Cys Ala Met Ile		
	35	40	45
Phe Lys Asn	Gly Asp Asp Leu Arg Gln Asp Met Leu Val Leu Gln Val		
	50	55	60
Leu Glu Val	Met Asp Asn Ile Trp Lys Ala Ala Asn Ile Asp Cys Cys		
65	70	75	80
Leu Asn Pro	Tyr Ala Val Leu Pro Met Gly Glu Met Ile Gly Ile Ile		
	85	90	95
Glu Val Val	Pro Asn Cys Lys Thr Ile Phe Glu Ile Gln Val Gly Thr		
	100	105	110
Gly			

<210> 19
 <211> 106
 <212> PRT
 <213> Caenorhabditis elegans

<400> 19
Leu Ala Phe Val Trp Thr Asp Arg Glu Asn Phe Ser Glu Leu Tyr Val
1 5 10 15
Met Leu Glu Lys Trp Lys Pro Pro Ser Val Ala Ala Ala Leu Thr Leu
20 25 30
Leu Gly Lys Arg Cys Thr Asp Arg Val Ile Arg Lys Phe Ala Val Glu
35 40 45
Lys Leu Asn Glu Gln Leu Ser Pro Val Thr Phe His Leu Phe Ile Leu
50 55 60
Pro Leu Ile Gln Ala Leu Lys Tyr Glu Pro Arg Ala Gln Ser Glu Val
65 70 75 80
Gly Met Met Leu Leu Thr Arg Ala Leu Cys Asp Tyr Arg Ile Gly His
85 90 95
Arg Leu Phe Trp Leu Leu Arg Ala Glu Ile
100 105

<210> 20
 <211> 139
 <212> PRT
 <213> Caenorhabditis elegans

<400> 20
Glu Tyr Trp Ile Val Thr Glu Phe His Glu Arg Leu Ser Leu Tyr Glu
1 5 10 15
Leu Leu Lys Asn Asn Val Ile Ser Ile Thr Ser Ala Asn Arg Ile Ile
20 25 30
Met Ser Met Ile Asp Gly Leu Gln Phe Leu His Asp Asp Arg Pro Tyr
35 40 45
Phe Phe Gly His Pro Lys Lys Pro Ile Ile His Arg Asp Ile Lys Ser
50 55 60
Lys Asn Ile Leu Val Lys Ser Asp Met Thr Thr Cys Ile Ala Asp Phe
65 70 75 80
Gly Leu Ala Arg Ile Tyr Ser Tyr Asp Ile Glu Gln Ser Asp Leu Leu
85 90 95
Gly Gln Val Gly Thr Lys Arg Tyr Met Ser Pro Glu Met Leu Glu Gly

		100						105				110			
Ala	Thr	Glu	Phe	Thr	Pro	Thr	Ala	Phe	Lys	Ala	Met	Asp	Val	Tyr	Ser
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Met	Gly	Leu	Val	Met	Trp	Glu	Val	Ile	Ser	Arg					
	130					135									

<210> 21
 <211> 61
 <212> PRT
 <213> Caenorhabditis elegans

<400> 21
 Ile Gly Phe Asp Pro Thr Ile Gly Arg Met Arg Asn Tyr Val Val Ser
 1 5 10 15
 Lys Lys Glu Arg Pro Gln Trp Arg Asp Glu Ile Ile Lys His Glu Tyr
 20 25 30
 Met Ser Leu Leu Lys Lys Val Thr Glu Glu Met Trp Asp Pro Glu Ala
 35 40 45
 Cys Ala Arg Ile Thr Ala Gly Cys Ala Phe Ala Arg Val
 50 55 60

<210> 22
 <211> 20
 <212> PRT
 <213> Caenorhabditis elegans

<400> 22
 Pro Ile Thr Asp Phe Gln Leu Ile Ser Lys Gly Arg Phe Gly Lys Val
 1 5 10 15
 Phe Lys Ala Gln
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<210> 23
 <211> 163
 <212> PRT
 <213> Caenorhabditis elegans

<400> 23
 Thr Asp Ser Glu Thr Arg Ser Arg Phe Ser Leu Gly Trp Tyr Asn Asn
 1 5 10 15
 Pro Asn Arg Ser Pro Gln Thr Ala Glu Val Arg Gly Leu Ile Gly Lys
 20 25 30
 Gly Val Arg Phe Tyr Leu Leu Ala Gly Glu Val Tyr Val Glu Asn Leu
 35 40 45
 Cys Asn Ile Pro Val Phe Val Gln Ser Ile Gly Ala Asn Met Lys Asn
 50 55 60
 Gly Phe Gln Leu Asn Thr Val Ser Lys Leu Pro Pro Thr Gly Thr Met
 65 70 75 80
 Lys Val Phe Asp Met Arg Leu Phe Ser Lys Gln Leu Arg Thr Ala Ala
 85 90 95
 Glu Lys Thr Tyr Gln Asp Val Tyr Cys Leu Ser Arg Met Cys Thr Val
 100 105 110
 Arg Val Ser Phe Cys Lys Gly Trp Gly Glu His Tyr Arg Arg Ser Thr
 115 120 125
 Val Leu Arg Ser Pro Val Trp Phe Gln Ala His Leu Asn Asn Pro Met

130 135 140
 His Trp Val Asp Ser Val Leu Thr Cys Met Gly Ala Pro Pro Arg Ile
 145 150 155 160
 Cys Ser Ser

<210> 24
 <211> 44
 <212> PRT
 <213> Caenorhabditis elegans

<400> 24
 Arg Ala Phe Arg Phe Pro Val Ile Arg Tyr Glu Ser Gln Val Lys Ser
 1 5 10 15
 Ile Leu Thr Cys Arg His Ala Phe Asn Ser His Ser Arg Asn Val Cys
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 Leu Asn Pro Tyr His Tyr Arg Trp Val Glu Leu Pro
 35 40

<210> 25
 <211> 38
 <212> PRT
 <213> Caenorhabditis elegans

<400> 25
 Val Glu Tyr Glu Glu Ser Pro Ser Trp Leu Lys Leu Ile Tyr Tyr Glu
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 Glu Gly Thr Met Ile Gly Glu Lys Ala Asp Val Glu Gly His His Cys
 20 25 30
 Leu Ile Asp Gly Phe Thr
 35

<210> 26
 <211> 60
 <212> PRT
 <213> Caenorhabditis elegans

<400> 26
 Asn Leu Ala Glu Thr Gly His Ser Lys Ile Met Arg Ala Ala His Lys
 1 5 10 15
 Val Ser Asn Pro Glu Ile Gly Tyr Cys Cys His Pro Thr Glu Tyr Asp
 20 25 30
 Tyr Ile Lys Leu Ile Tyr Val Asn Arg Asp Gly Arg Val Ser Ile Ala
 35 40 45
 Asn Val Asn Gly Met Ile Ala Lys Lys Cys Gly Cys
 50 55 60

<210> 27
 <211> 20
 <212> PRT
 <213> Caenorhabditis elegans

<400> 27
 Asp Trp Ile Val Ala Pro Pro Arg Tyr Asn Ala Tyr Met Cys Arg Gly

1 5 10 15
 Asp Cys His Tyr
 20

<210> 28
 <211> 43
 <212> PRT
 <213> Caenorhabditis elegans

<400> 28
 Val Cys Asn Ala Glu Ala Gln Ser Lys Gly Cys Cys Leu Tyr Asp Leu
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 Glu Ile Glu Phe Glu Lys Ile Gly Trp Asp Trp Ile Val Ala Pro Pro
 20 25 30
 Arg Tyr Asn Ala Tyr Met Cys Arg Gly Asp Cys
 35 40

<210> 29
 <211> 70
 <212> PRT
 <213> Caenorhabditis elegans

<400> 29
 Asp Cys His Tyr Asn Ala His His Phe Asn Leu Ala Glu Thr Gly His
 1 5 10 15
 Ser Lys Ile Met Arg Ala Ala His Lys Val Ser Asn Pro Glu Ile Gly
 20 25 30
 Tyr Cys Cys His Pro Thr Glu Tyr Asp Tyr Ile Lys Leu Ile Tyr Val
 35 40 45
 Asn Arg Asp Gly Arg Val Ser Ile Ala Asn Val Asn Gly Met Ile Ala
 50 55 60
 Lys Lys Cys Gly Cys Ser
 65 70

<210> 30
 <211> 35
 <212> PRT
 <213> Caenorhabditis elegans

<400> 30
 Cys Cys Leu Tyr Asp Leu Glu Ile Glu Phe Glu Lys Ile Gly Trp Asp
 1 5 10 15
 Trp Ile Val Ala Pro Pro Arg Tyr Asn Ala Tyr Met Cys Arg Gly Asp
 20 25 30
 Cys His Tyr
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<210> 31
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
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<221> misc_feature
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 <223> n = A,T,C or G

<400> 31
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23

<210> 32
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 <213> Artificial Sequence

<220>
 <223> Degenerate probe

<221> misc_feature
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18

<210> 33
 <211> 127
 <212> PRT
 <213> Caenorhabditis elegans

<400> 33
 Lys Phe His Glu Trp Ala Ala Gln Ile Cys Asp Gly Met Ala Tyr Leu
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 Glu Ser Leu Lys Phe Cys His Arg Asp Leu Ala Ala Arg Asn Cys Met
 20 25 30
 Ile Asn Arg Asp Glu Thr Val Lys Ile Gly Asp Phe Gly Met Ala Arg
 35 40 45
 Asp Leu Phe Tyr His Asp Tyr Tyr Lys Pro Ser Gly Lys Arg Met Met
 50 55 60
 Pro Val Arg Trp Met Ser Pro Glu Ser Leu Lys Asp Gly Lys Phe Asp
 65 70 75 80
 Ser Lys Ser Asp Val Trp Ser Phe Gly Val Val Leu Tyr Glu Met Val
 85 90 95
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 100 105 110
 Asn Tyr Ile Gly Met Ala Arg Lys Val Ile Lys Lys Pro Glu Cys
 115 120 125

<210> 34
 <211> 131
 <212> PRT
 <213> Caenorhabditis elegans

<400> 34
 Asn Thr Thr Cys Gln Lys Ser Cys Ala Tyr Asp Arg Leu Leu Pro Thr
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 20 25 30
 Gln Cys Val Gly Gly Cys Glu Arg Val Asn Asp Ala Thr Ala Cys His
 35 40 45

Ala Cys Lys Asn Val Tyr His Lys Gly Lys Cys Ile Glu Lys Cys Asp
50 55 60
Ala His Leu Tyr Leu Leu Gln Arg Arg Cys Val Thr Arg Glu Gln
65 70 75 80
Cys Leu Gln Leu Asn Pro Val Leu Ser Asn Lys Thr Val Pro Ile Lys
85 90 95
Ala Thr Ala Gly Leu Cys Ser Asp Lys Cys Pro Asp Gly Tyr Gln Ile
100 105 110
Asn Pro Asp Asp His Arg Glu Cys Arg Lys Cys Val Gly Lys Cys Glu
115 120 125
Ile Val Cys
130

<210> 35
<211> 103
<212> PRT
<213> Caenorhabditis elegans

<400> 35
Phe Asp Gln Lys Ala Cys Glu Ser Leu Val Lys Lys Leu Lys Asp Lys
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Lys Asn Asp Leu Gln Asn Leu Ile Asp Val Val Leu Ser Lys Gly Thr
20 25 30
Lys Tyr Thr Gly Cys Ile Thr Ile Pro Arg Thr Leu Asp Gly Arg Leu
35 40 45
Gln Val His Gly Arg Lys Gly Phe Pro His Val Val Tyr Gly Lys Leu
50 55 60
Trp Arg Phe Asn Glu Met Thr Lys Asn Glu Thr Arg His Val Asp His
65 70 75 80
Cys Lys His Ala Phe Glu Met Lys Ser Asp Met Val Cys Val Asn Pro
85 90 95
Tyr His Tyr Glu Ile Val Ile
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<210> 36
<211> 79
<212> PRT
<213> Caenorhabditis elegans

<400> 36
Asn Arg Tyr Ser Leu Gly Leu Glu Pro Asn Pro Ile Arg Glu Pro Val
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Ala Phe Lys Val Arg Lys Ala Ile Val Asp Gly Ile Arg Phe Ser Tyr
20 25 30
Lys Lys Asp Gly Ser Val Trp Leu Gln Asn Arg Met Lys Tyr Pro Val
35 40 45
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50 55 60
Asp Lys Val His Lys Val Tyr Gly Cys Ala Ser Ile Lys Thr Phe
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<210> 37
<211> 106
<212> PRT
<213> Caenorhabditis elegans

<400> 37

Lys	Lys	Thr	Thr	Arg	Arg	Asn	Ala	Trp	Gly	Asn	Met	Ser	Tyr	Ala	
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Glu	Leu	Ile	Thr	Ala	Ile	Met	Ala	Ser	Pro	Glu	Lys	Arg	Leu	Thr	
		20				25					30				
Leu	Ala	Gln	Val	Tyr	Glu	Trp	Met	Val	Gln	Asn	Val	Pro	Tyr	Phe	Arg
		35				40					45				
Asp	Lys	Gly	Asp	Ser	Asn	Ser	Ser	Ala	Gly	Trp	Lys	Asn	Ser	Ile	Arg
	50					55					60				
His	Asn	Leu	Ser	Leu	His	Ser	Arg	Phe	Met	Arg	Ile	Gln	Asn	Glu	Gly
65					70					75					80
Ala	Gly	Lys	Ser	Ser	Trp	Trp	Val	Ile	Asn	Pro	Asp	Ala	Lys	Pro	Gly
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<210> 38

<211> 60

<212> PRT

<213> Caenorhabditis elegans

<400> 38

Glu	Ile	Lys	Leu	Ser	Asp	Phe	Lys	His	Gln	Leu	Phe	Glu	Leu	Ile	Ala
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		20					25					30			
Arg	Gln	Leu	Asn	Asn	Phe	Gly	Glu	Ile	Glu	Val	Ile	Phe	Asn	Asp	Asp
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<210> 39

<211> 2784

<212> DNA

<213> Caenorhabditis elegans

<400> 39

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<210> 40
 <211> 796
 <212> PRT
 <213> *Caenorhabditis elegans*

<400> 40

Met	Lys	Leu	Ile	Ala	Thr	Ser	Leu	Leu	Val	Pro	Asp	Glu	His	Thr	Pro
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Met	Met	Ser	Pro	Val	Asn	Thr	Thr	Thr	Lys	Ile	Leu	Gln	Arg	Ser	Gly
			20					25					30		
Ile	Lys	Met	Glu	Ile	Pro	Pro	Tyr	Leu	Asp	Pro	Asp	Ser	Gln	Asp	Asp
		35				40					45				
Asp	Pro	Glu	Asp	Gly	Val	Asn	Tyr	Pro	Asp	Pro	Asp	Leu	Phe	Asp	Thr
	50				55					60					
Lys	Asn	Thr	Asn	Met	Thr	Glu	Tyr	Asp	Leu	Asp	Val	Leu	Lys	Leu	Gly
65				70				75						80	
Lys	Pro	Ala	Val	Asp	Glu	Ala	Arg	Lys	Lys	Ile	Glu	Val	Pro	Asp	Ala
			85					90						95	
Ser	Ala	Pro	Pro	Asn	Lys	Ile	Val	Glu	Tyr	Leu	Met	Tyr	Tyr	Arg	Thr
		100					105						110		
Leu	Lys	Glu	Ser	Glu	Leu	Ile	Gln	Leu	Asn	Ala	Tyr	Arg	Thr	Lys	Arg
	115					120					125				
Asn	Arg	Leu	Ser	Leu	Asn	Leu	Val	Lys	Asn	Asn	Ile	Asp	Arg	Glu	Phe
	130				135						140				
Asp	Gln	Lys	Ala	Cys	Glu	Ser	Leu	Val	Lys	Lys	Leu	Lys	Asp	Lys	Lys
145				150					155					160	
Asn	Asp	Leu	Gln	Asn	Leu	Ile	Asp	Val	Val	Leu	Ser	Lys	Gly	Thr	Lys
			165					170					175		
Tyr	Thr	Gly	Cys	Ile	Thr	Ile	Pro	Arg	Thr	Leu	Asp	Gly	Arg	Leu	Gln

			180					185					190				
Val	His	Gly	Arg	Lys	Gly	Phe	Pro	His	Val	Val	Tyr	Gly	Lys	Leu	Trp		
		195					200					205					
Arg	Phe	Asn	Glu	Met	Thr	Lys	Asn	Glu	Thr	Arg	His	Val	Asp	His	Cys		
	210					215					220						
Lys	His	Ala	Phe	Glu	Met	Lys	Ser	Asp	Met	Val	Cys	Val	Asn	Pro	Tyr		
225					230					235					240		
His	Tyr	Glu	Ile	Val	Ile	Gly	Thr	Met	Ile	Val	Gly	Gln	Arg	Asp	His		
				245					250					255			
Asp	Asn	Arg	Asp	Met	Pro	Pro	Pro	His	Gln	Arg	Tyr	His	Thr	Pro	Gly		
			260					265					270				
Arg	Gln	Asp	Pro	Val	Asp	Asp	Met	Ser	Arg	Phe	Ile	Pro	Pro	Ala	Ser		
		275					280					285					
Ile	Arg	Pro	Pro	Pro	Met	Asn	Met	His	Thr	Arg	Pro	Gln	Pro	Met	Pro		
	290					295					300						
Gln	Gln	Leu	Pro	Ser	Val	Gly	Ala	Thr	Phe	Ala	His	Pro	Leu	Pro	His		
305					310					315					320		
Gln	Ala	Pro	His	Asn	Pro	Gly	Val	Ser	His	Pro	Tyr	Ser	Ile	Ala	Pro		
				325					330					335			
Gln	Thr	His	Tyr	Pro	Leu	Asn	Met	Asn	Pro	Ile	Pro	Gln	Met	Pro	Gln		
			340					345					350				
Met	Pro	Gln	Met	Pro	Pro	Pro	Leu	His	Gln	Gly	Tyr	Gly	Met	Asn	Gly		
		355					360					365					
Pro	Ser	Cys	Ser	Ser	Glu	Asn	Asn	Asn	Pro	Phe	His	Gln	Asn	His	His		
	370					375					380						
Tyr	Asn	Asp	Ile	Ser	His	Pro	Asn	His	Tyr	Ser	Tyr	Asp	Cys	Gly	Pro		
385					390					395					400		
Asn	Leu	Tyr	Gly	Phe	Pro	Thr	Pro	Tyr	Pro	Asp	Phe	His	His	Pro	Phe		
				405					410					415			
Asn	Gln	Gln	Pro	His	Gln	Pro	Pro	Gln	Leu	Ser	Gln	Asn	His	Thr	Ser		
			420					425					430				
Gln	Gln	Gly	Ser	His	Gln	Pro	Gly	His	Gln	Gly	Gln	Val	Pro	Asn	Asp		
		435					440					445					
Pro	Pro	Ile	Ser	Arg	Pro	Val	Leu	Gln	Pro	Ser	Thr	Val	Thr	Leu	Asp		
	450					455						460					
Val	Phe	Arg	Arg	Tyr	Cys	Arg	Gln	Thr	Phe	Gly	Asn	Arg	Phe	Phe	Glu		
465					470					475					480		
Gly	Glu	Ser	Glu	Gln	Ser	Gly	Ala	Ile	Ile	Arg	Ser	Ser	Asn	Lys	Phe		
				485					490					495			
Ile	Glu	Glu	Phe	Asp	Ser	Pro	Ile	Cys	Gly	Val	Thr	Val	Val	Arg	Pro		
			500					505					510				
Arg	Met	Thr	Asp	Gly	Glu	Val	Leu	Glu	Asn	Ile	Met	Pro	Glu	Asp	Ala		
		515					520					525					
Pro	Tyr	His	Asp	Ile	Cys	Lys	Phe	Ile	Leu	Arg	Leu	Thr	Ser	Glu	Ser		
	530					535					540						
Val																	

Lys	Asp	Lys	Val	His	Lys	Val	Tyr	Gly	Cys	Ala	Ser	Ile	Lys	Thr	Phe
			660					665					670		
Gly	Phe	Asn	Val	Ser	Lys	Gln	Ile	Ile	Arg	Asp	Ala	Leu	Leu	Ser	Lys
		675					680					685			
Gln	Met	Ala	Thr	Met	Tyr	Leu	Gln	Gly	Lys	Leu	Thr	Pro	Met	Asn	Tyr
	690					695					700				
Ile	Tyr	Glu	Lys	Lys	Thr	Gln	Glu	Glu	Leu	Arg	Arg	Glu	Ala	Thr	Arg
705					710					715					720
Thr	Thr	Asp	Ser	Leu	Ala	Lys	Tyr	Cys	Cys	Val	Arg	Val	Ser	Phe	Cys
			725					730						735	
Lys	Gly	Phe	Gly	Glu	Ala	Tyr	Pro	Glu	Arg	Pro	Ser	Ile	His	Asp	Cys
		740					745					750			
Pro	Val	Trp	Ile	Glu	Leu	Lys	Ile	Asn	Ile	Ala	Tyr	Asp	Phe	Met	Asp
		755					760					765			
Ser	Ile	Cys	Gln	Tyr	Ile	Thr	Asn	Cys	Phe	Glu	Pro	Leu	Gly	Met	Glu
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Asp	Phe	Ala	Lys	Leu	Gly	Ile	Asn	Val	Ser	Asp	Asp				
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<210> 41
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 <212> PRT
 <213> Caenorhabditis elegans

<400> 41

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		20						25				30			
Tyr	Gly	Gly	Lys	Pro	Ser	His	Gly	Leu	Glu	Asp	Ile	Pro	Asp	Val	Glu
	35						40					45			
Glu	Tyr	Glu	Arg	Asn	Leu	Leu	Gly	Ala	Gly	Ala	Gly	Phe	Asn	Leu	Leu
	50				55					60					
Asn	Val	Gly	Asn	Met	Ala	Asn	Val	Pro	Asp	Glu	His	Thr	Pro	Met	Met
65				70					75						80
Ser	Pro	Val	Asn	Thr	Thr	Thr	Lys	Ile	Leu	Gln	Arg	Ser	Gly	Ile	Lys
			85					90					95		
Met	Glu	Ile	Pro	Pro	Tyr	Leu	Asp	Pro	Asp	Ser	Gln	Asp	Asp	Asp	Pro
		100					105					110			
Glu	Asp	Gly	Val	Asn	Tyr	Pro	Asp	Pro	Asp	Leu	Phe	Asp	Thr	Lys	Asn
	115					120						125			
Thr	Asn	Met	Thr	Glu	Tyr	Asp	Leu	Asp	Val	Leu	Lys	Leu	Gly	Lys	Pro
	130				135						140				
Ala	Val	Asp	Glu	Ala	Arg	Lys	Lys	Ile	Glu	Val	Pro	Asp	Ala	Ser	Ala
145					150					155					160
Pro	Pro	Asn	Lys	Ile	Val	Glu	Tyr	Leu	Met	Tyr	Tyr	Arg	Thr	Leu	Lys
			165					170						175	
Glu	Ser	Glu	Leu	Ile	Gln	Leu	Asn	Ala	Tyr	Arg	Thr	Lys	Arg	Asn	Arg
		180				185						190			
Leu	Ser	Leu	Asn	Leu	Val	Lys	Asn	Asn	Ile	Asp	Arg	Glu	Phe	Asp	Gln
		195				200					205				
Lys	Ala	Cys	Glu	Ser	Leu	Val	Lys	Lys	Leu	Lys	Asp	Lys	Lys	Asn	Asp
	210				215					220					
Leu	Gln	Asn	Leu	Ile	Asp	Val	Val	Leu	Ser	Lys	Gly	Thr	Lys	Tyr	Thr
225				230					235						240
Gly	Cys	Ile	Thr	Ile	Pro	Arg	Thr	Leu	Asp	Gly	Arg	Leu	Gln	Val	His

				245					250					255	
Gly	Arg	Lys	Gly	Phe	Pro	His	Val	Val	Tyr	Gly	Lys	Leu	Trp	Arg	Phe
			260					265					270		
Asn	Glu	Met	Thr	Lys	Asn	Glu	Thr	Arg	His	Val	Asp	His	Cys	Lys	His
		275					280					285			
Ala	Phe	Glu	Met	Lys	Ser	Asp	Met	Val	Cys	Val	Asn	Pro	Tyr	His	Tyr
	290					295					300				
Glu	Ile	Val	Ile	Gly	Thr	Met	Ile	Val	Gly	Gln	Arg	Asp	His	Asp	Asn
305				310					315					320	
Arg	Asp	Met	Pro	Pro	Pro	His	Gln	Arg	Tyr	His	Thr	Pro	Gly	Arg	Gln
			325					330					335		
Asp	Pro	Val	Asp	Asp	Met	Ser	Arg	Phe	Ile	Pro	Pro	Ala	Ser	Ile	Arg
			340					345				350			
Pro	Pro	Pro	Met	Asn	Met	His	Thr	Arg	Pro	Gln	Pro	Met	Pro	Gln	Gln
		355					360					365			
Leu	Pro	Ser	Val	Gly	Ala	Thr	Phe	Ala	His	Pro	Leu	Pro	His	Gln	Ala
	370					375					380				
Pro	His	Asn	Pro	Gly	Val	Ser	His	Pro	Tyr	Ser	Ile	Ala	Pro	Gln	Thr
385				390					395					400	
His	Tyr	Pro	Leu	Asn	Met	Asn	Pro	Ile	Pro	Gln	Met	Pro	Gln	Met	Pro
			405					410					415		
Gln	Met	Pro	Pro	Pro	Leu	His	Gln	Gly	Tyr	Gly	Met	Asn	Gly	Pro	Ser
			420					425					430		
Cys	Ser	Ser	Glu	Asn	Asn	Asn	Pro	Phe	His	Gln	Asn	His	His	Tyr	Asn
		435					440					445			
Asp	Ile	Ser	His	Pro	Asn	His	Tyr	Ser	Tyr	Asp	Cys	Gly	Pro	Asn	Leu
	450					455					460				
Tyr	Gly	Phe	Pro	Thr	Pro	Tyr	Pro	Asp	Phe	His	Pro	Phe	Asn	Gln	
465				470					475					480	
Gln	Pro	His	Gln	Pro	Pro	Gln	Leu	Ser	Gln	Asn	His	Thr	Ser	Gln	Gln
			485						490					495	
Gly	Ser	His	Gln	Pro	Gly	His	Gln	Gly	Gln	Val	Pro	Asn	Asp	Pro	Pro
			500					505					510		
Ile	Ser	Arg	Pro	Val	Leu	Gln	Pro	Ser	Thr	Val	Thr	Leu	Asp	Val	Phe
		515					520					525			
Arg	Arg	Tyr	Cys	Arg	Gln	Thr	Phe	Gly	Asn	Arg	Phe	Phe	Glu	Gly	Glu
	530					535					540				
Ser	Glu	Gln	Ser	Gly	Ala	Ile	Ile	Arg	Ser	Ser	Asn	Lys	Phe	Ile	Glu
545				550					555					560	
Glu	Phe	Asp	Ser	Pro	Ile	Cys	Gly	Val	Thr	Val	Val	Arg	Pro	Arg	Met
			565						570					575	
Thr	Asp	Gly	Glu	Val	Leu	Glu	Asn	Ile	Met	Pro	Glu	Asp	Ala	Pro	Tyr
			580					585					590		
His	Asp	Ile	Cys	Lys	Phe	Ile	Leu	Arg	Leu	Thr	Ser	Glu	Ser	Val	Thr
	595						600								

705					710					715					720
Lys	Val	His	Lys	Val	Tyr	Gly	Cys	Ala	Ser	Ile	Lys	Thr	Phe	Gly	Phe
				725					730					735	
Asn	Val	Ser	Lys	Gln	Ile	Ile	Arg	Asp	Ala	Leu	Leu	Ser	Lys	Gln	Met
			740					745					750		
Ala	Thr	Met	Tyr	Leu	Gln	Gly	Lys	Leu	Thr	Pro	Met	Asn	Tyr	Ile	Tyr
		755					760				765				
Glu	Lys	Lys	Thr	Gln	Glu	Glu	Leu	Arg	Arg	Glu	Ala	Thr	Arg	Thr	Thr
	770					775				780					
Asp	Ser	Leu	Ala	Lys	Tyr	Cys	Cys	Val	Arg	Val	Ser	Phe	Cys	Lys	Gly
785					790				795						800
Phe	Gly	Glu	Ala	Tyr	Pro	Glu	Arg	Pro	Ser	Ile	His	Asp	Cys	Pro	Val
				805					810					815	
Trp	Ile	Glu	Leu	Lys	Ile	Asn	Ile	Ala	Tyr	Asp	Phe	Met	Asp	Ser	Ile
			820					825					830		
Cys	Gln	Tyr	Ile	Thr	Asn	Cys	Phe	Glu	Pro	Leu	Gly	Met	Glu	Asp	Phe
	835						840					845			
Ala	Lys	Leu	Gly	Ile	Asn	Val	Ser	Asp	Asp						
	850					855									

<210> 42
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 <213> Caenorhabditis elegans

<400> 42

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			20					25				30			
Tyr	Gly	Gly	Lys	Pro	Ser	His	Gly	Leu	Glu	Asp	Ile	Pro	Asp	Val	Glu
	35						40				45				
Glu	Tyr	Glu	Arg	Asn	Leu	Leu	Gly	Ala	Gly	Ala	Gly	Phe	Asn	Leu	Leu
	50				55				60						
Asn	Val	Gly	Asn	Met	Ala	Asn	Glu	Phe	Lys	Pro	Ile	Ile	Thr	Leu	Asp
65				70					75					80	
Thr	Lys	Pro	Pro	Arg	Asp	Ala	Asn	Lys	Ser	Leu	Ala	Phe	Asn	Gly	Gly
			85					90					95		
Leu	Lys	Leu	Ile	Thr	Pro	Lys	Thr	Glu	Val	Pro	Asp	Glu	His	Thr	Pro
		100					105					110			
Met	Met	Ser	Pro	Val	Asn	Thr	Thr	Lys	Ile	Leu	Gln	Arg	Ser	Gly	
	115					120					125				
Ile	Lys	Met	Glu	Ile	Pro	Pro	Tyr	Leu	Asp	Pro	Asp	Ser	Gln	Asp	Asp
	130				135					140					
Asp	Pro	Glu	Asp	Gly	Val	Asn	Tyr	Pro	Asp	Pro	Asp	Leu	Phe	Asp	Thr
145					150				155					160	
Lys	Asn	Thr	Asn	Met	Thr	Glu	Tyr	Asp	Leu	Asp	Val	Leu	Lys	Leu	Gly
			165					170					175		
Lys	Pro	Ala	Val	Asp	Glu	Ala	Arg	Lys	Lys	Ile	Glu	Val	Pro	Asp	Ala
		180					185					190			
Ser	Ala	Pro	Pro	Asn	Lys	Ile	Val	Glu	Tyr	Leu	Met	Tyr	Tyr	Arg	Thr
	195					200					205				
Leu	Lys	Glu	Ser	Glu	Leu	Ile	Gln	Leu	Asn	Ala	Tyr	Arg	Thr	Lys	Arg
	210				215					220					
Asn	Arg	Leu	Ser	Leu	Asn	Leu	Val	Lys	Asn	Asn	Ile	Asp	Arg	Glu	Phe
225				230					235					240	
Asp	Gln	Lys	Ala	Cys	Glu	Ser	Leu	Val	Lys	Lys	Leu	Lys	Asp	Lys	Lys

Asn	Asp	Leu	Gln	245	Asn	Leu	Ile	Asp	Val	250	Val	Leu	Ser	Lys	Gly	255	Thr	Lys
Tyr	Thr	Gly	Cys	260	Ile	Thr	Ile	Pro	Arg	265	Thr	Leu	Asp	Gly	270	Arg	Leu	Gln
Val	His	Gly	Arg	275	Lys	Gly	Phe	Pro	His	280	Val	Val	Tyr	Gly	285	Lys	Leu	Trp
Arg	Phe	Asn	Glu	290	Met	Thr	Lys	Asn	Glu	295	Thr	Arg	His	Val	300	Asp	His	Cys
Lys	His	Ala	Phe	305	Glu	Met	Lys	Ser	Asp	310	Met	Val	Cys	Val	315	Asn	Pro	Tyr
His	Tyr	Glu	Ile	325	Val	Ile	Gly	Thr	Met	330	Ile	Val	Gly	Gln	335	Arg	Asp	His
Asp	Asn	Arg	Asp	340	Met	Pro	Pro	Pro	His	345	Gln	Arg	Tyr	His	350	Thr	Pro	Gly
Arg	Gln	Asp	Pro	355	Val	Asp	Asp	Met	Ser	360	Arg	Phe	Ile	Pro	365	Pro	Ala	Ser
Ile	Arg	Pro	Pro	370	Pro	Met	Asn	Met	His	375	Thr	Arg	Pro	Gln	380	Pro	Met	Pro
Gln	Gln	Leu	Pro	385	Ser	Val	Gly	Ala	Thr	390	Phe	Ala	His	Pro	395	Leu	Pro	His
Gln	Ala	Pro	His	405	Asn	Pro	Gly	Val	Ser	410	His	Pro	Tyr	Ser	415	Ile	Ala	Pro
Gln	Thr	His	Tyr	420	Pro	Leu	Asn	Met	Asn	425	Pro	Ile	Pro	Gln	430	Met	Pro	Gln
Met	Pro	Gln	Met	435	Pro	Pro	Pro	Leu	His	440	Gln	Gly	Tyr	Gly	445	Met	Asn	Gly
Pro	Ser	Cys	Ser	450	Ser	Glu	Asn	Asn	Asn	455	Pro	Phe	His	Gln	460	Asn	His	His
Tyr	Asn	Asp	Ile	465	Ser	His	Pro	Asn	His	470	Tyr	Ser	Tyr	Asp	475	Cys	Gly	Pro
Asn	Leu	Tyr	Gly	485	Phe	Pro	Thr	Pro	Tyr	490	Pro	Asp	Phe	His	495	His	Pro	Phe
Asn	Gln	Gln	Pro	500	His	Gln	Pro	Pro	Gln	505	Leu	Ser	Gln	Asn	510	His	Thr	Ser
Gln	Gln	Gly	Ser	515	His	Gln	Pro	Gly	His	520	Gln	Gly	Gln	Val	525	Pro	Asn	Asp
Pro	Pro	Ile	Ser	530	Arg	Pro	Val	Leu	Gln	535	Pro	Ser	Thr	Val	540	Thr	Leu	Asp
Val	Phe	Arg	Arg	545	Tyr	Cys	Arg	Gln	Thr	550	Phe	Gly	Asn	Arg	555	Phe	Phe	Glu
Gly	Glu	Ser	Glu	565	Gln	Ser	Gly	Ala	Ile	570	Ile	Arg	Ser	Ser	575	Asn	Lys	Phe
Ile	Glu	Glu	Phe	580	Asp	Ser	Pro	Ile	Cys	585	Gly	Val	Thr	Val	590	Val	Arg	Pro
Arg	Met	Thr	Asp	595	Gly	Glu	Val	Leu	Glu	600	Asn	Ile	Met	Pro	605	Glu	Asp	Ala
Pro	Tyr	His	Asp	610	Ile	Cys	Lys	Phe	Ile	615	Leu	Arg	Leu	Thr	620	Ser	Glu	Ser
Val	Thr	Phe	Ser	625	Gly	Glu	Gly	Pro	Glu	630	Val	Ser	Asp	Leu	635	Asn	Glu	Lys
Trp	Gly	Thr	Ile	645	Val	Tyr	Tyr	Glu	Lys	650	Asn	Leu	Gln	Ile	655	Gly	Glu	Lys
Lys	Cys	Ser	Arg	660	Gly	Asn	Phe	His	Val	665	Asp	Gly	Gly	Phe	670	Ile	Cys	Ser
Glu	Asn	Arg	Tyr	675	Ser	Leu	Gly	Leu	Glu	680	Pro	Asn	Pro	Ile	685	Arg	Glu	Pro
Val	Ala	Phe	Lys	690	Val	Arg	Lys	Ala	Ile	695	Val	Asp	Gly	Ile	700	Arg	Phe	Ser

705 Tyr Lys Lys Asp Gly Ser Val Trp Leu Gln Asn Arg Met Lys Tyr Pro
725 730 735
Val Phe Val Thr Ser Gly Tyr Leu Asp Glu Gln Ser Gly Gly Leu Lys
740 745 750
Lys Asp Lys Val His Lys Val Tyr Gly Cys Ala Ser Ile Lys Thr Phe
755 760 765
Gly Phe Asn Val Ser Lys Gln Ile Ile Arg Asp Ala Leu Leu Ser Lys
770 775 780
Gln Met Ala Thr Met Tyr Leu Gln Gly Lys Leu Thr Pro Met Asn Tyr
785 790 795 800
Ile Tyr Glu Lys Lys Thr Gln Glu Glu Leu Arg Arg Glu Ala Thr Arg
805 810 815
Thr Thr Asp Ser Leu Ala Lys Tyr Cys Cys Val Arg Val Ser Phe Cys
820 825 830
Lys Gly Phe Gly Glu Ala Tyr Pro Glu Arg Pro Ser Ile His Asp Cys
835 840 845
Pro Val Trp Ile Glu Leu Lys Ile Asn Ile Ala Tyr Asp Phe Met Asp
850 855 860
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<212> DNA
<213> Caenorhabditis elegans

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 <213> *Caenorhabditis elegans*

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<210> 46
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 <212> PRT
 <213> Caenorhabditis elegans

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aaaatttgca aattggcgag aaaaaatgtt cgagaggaaa tttccacgtg gatggcggat 2100
tcatttgctc tgagaatcgt tacagtctcg gacttgagcc aaatccaatt agagaaccag 2160
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gttgtgtccg tgtctcgttc tgcaaaggat ttggagaagc ataccagaa cgcccgtcaa 2580
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ctatgttatc acaagttcca agcagtttca atacaaacat aggatatgtt aacaactttt 2880
gataagaatc aagttaccaa ctgttcattg tgagctttga gctgtataga aggacaatgt 2940
atcccatacc tcaatcttta atagtcatca gtcactggtc ccgcaccaat tttttcgatt 3000
cgcatatgtc atatatgtga ccgtggccct ttttattgta acttttaata tattttcttc 3060
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<210> 54
 <211> 103
 <212> PRT
 <213> *Caenorhabditis elegans*

```

<400> 54
Lys Lys Thr Thr Thr Arg Arg Asn Ala Trp Gly Asn Met Ser Tyr Ala
 1          5          10          15
Glu Leu Ile Thr Thr Ala Ile Met Ala Ser Pro Glu Lys Arg Leu Thr
      20          25          30
Leu Ala Gln Val Tyr Glu Trp Met Val Gln Asn Val Pro Tyr Phe Arg
      35          40          45
Asp Lys Gly Asp Ser Asn Ser Ser Ala Gly Trp Lys Asn Ser Ile Arg
 50          55          60
His Asn Leu Ser Leu His Ser Arg Phe Met Arg Ile Gln Asn Glu Gly
 65          70          75          80
Ala Gly Lys Ser Ser Trp Trp Val Ile Asn Pro Asp Ala Lys Pro Gly
      85          90          95
Met Asn Pro Arg Arg Thr Arg
      100

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<210> 55
 <211> 41
 <212> PRT
 <213> *Caenorhabditis elegans*

```

<400> 55
Thr Phe Met Asn Thr Pro Asp Asp Val Met Met Asn Asp Asp Met Glu
 1          5          10          15
Pro Ile Pro Arg Asp Arg Cys Asn Thr Trp Pro Met Arg Arg Pro Gln
      20          25          30
Leu Glu Pro Pro Leu Asn Ser Ser Pro
      35          40

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<210> 56
 <211> 109

<212> PRT
 <213> Caenorhabditis elegans

<400> 56

Asp	Asp	Thr	Val	Ser	Gly	Lys	Lys	Thr	Thr	Thr	Arg	Arg	Asn	Ala	Trp
1				5					10					15	
Gly	Asn	Met	Ser	Tyr	Ala	Glu	Leu	Ile	Thr	Thr	Ala	Ile	Met	Ala	Ser
			20					25					30		
Pro	Glu	Lys	Arg	Leu	Thr	Leu	Ala	Gln	Val	Tyr	Glu	Trp	Met	Val	Gln
		35					40					45			
Asn	Val	Pro	Tyr	Phe	Arg	Asp	Lys	Gly	Asp	Ser	Asn	Ser	Ser	Ala	Gly
	50					55					60				
Trp	Lys	Asn	Ser	Ile	Arg	His	Asn	Leu	Ser	Leu	His	Ser	Arg	Phe	Met
65					70					75					80
Arg	Ile	Gln	Asn	Glu	Gly	Ala	Gly	Lys	Ser	Ser	Trp	Trp	Val	Ile	Asn
			85						90					95	
Pro	Asp	Ala	Lys	Pro	Gly	Met	Asn	Pro	Arg	Arg	Thr	Arg			
			100					105							

<210> 57
 <211> 655
 <212> PRT
 <213> Homo sapiens

<400> 57

Met	Ala	Glu	Ala	Pro	Gln	Val	Val	Glu	Ile	Asp	Pro	Asp	Phe	Glu	Pro
1				5					10					15	
Leu	Pro	Arg	Pro	Arg	Ser	Cys	Thr	Trp	Pro	Leu	Pro	Arg	Pro	Glu	Phe
			20					25					30		
Ser	Gln	Ser	Asn	Ser	Ala	Thr	Ser	Ser	Pro	Ala	Pro	Ser	Gly	Ser	Ala
		35					40					45			
Ala	Ala	Asn	Pro	Asp	Ala	Ala	Ala	Gly	Leu	Pro	Ser	Ala	Ser	Ala	Ala
	50					55					60				
Ala	Val	Ser	Ala	Asp	Phe	Met	Ser	Asn	Leu	Ser	Leu	Leu	Glu	Glu	Ser
65					70					75					80
Glu	Asp	Phe	Pro	Gln	Ala	Pro	Gly	Ser	Val	Ala	Ala	Ala	Val	Ala	Ala
				85					90					95	
Ala	Ala	Ala	Ala	Ala	Ala	Thr	Gly	Gly	Leu	Cys	Gly	Asp	Phe	Gln	Gly
			100					105					110		
Pro	Glu	Ala	Gly	Cys	Leu	His	Pro	Pro	Ala	Pro	Pro	Gln	Pro	Pro	Pro
		115					120						125		
Gly	Pro	Val	Ser	Gln	His	Pro	Pro	Val	Pro	Pro	Ala	Ala	Ala	Gly	Pro
	130					135						140			
Leu	Ala	Gly	Gln	Pro	Arg	Lys	Ser	Ser	Ser	Ser	Arg	Arg	Asn	Ala	Trp
145					150					155					160
Gly	Asn	Leu	Ser	Tyr	Ala	Asp	Leu	Ile	Thr	Lys	Ala	Ile	Glu	Ser	Ser
				165					170					175	
Ala	Glu	Lys	Arg	Leu	Thr	Leu	Ser	Gln	Ile	Tyr	Glu	Trp	Met	Val	Lys
			180					185					190		
Ser	Val	Pro	Tyr	Phe	Lys	Asp	Lys	Gly	Asp	Ser	Asn	Ser	Ser	Ala	Gly
		195					200					205			
Trp	Lys	Asn	Ser	Ile	Arg	His	Asn	Leu	Ser	Leu	His	Ser	Lys	Phe	Ile
	210					215						220			
Arg	Val	Gln	Asn	Glu	Gly	Thr	Gly	Lys	Ser	Ser	Trp	Trp	Met	Leu	Asn
225					230					235					240
Pro	Glu	Gly	Gly	Lys	Ser	Gly	Lys	Ser	Pro	Arg	Arg	Arg	Ala	Ala	Ser
				245					250					255	

Met Asp Asn Asn Ser Lys Phe Ala Lys Ser Arg Ser Arg Ala Ala Lys
260 265 270
Lys Lys Ala Ser Leu Gln Ser Gly Gln Glu Gly Ala Gly Asp Ser Pro
275 280 285
Gly Ser Gln Phe Ser Lys Trp Pro Ala Ser Pro Gly Ser His Ser Asn
290 295 300
Asp Asp Phe Asp Asn Trp Ser Thr Phe Arg Pro Arg Thr Ser Ser Asn
305 310 315 320
Ala Ser Thr Ile Ser Gly Arg Leu Ser Pro Ile Met Thr Glu Gln Asp
325 330 335
Asp Leu Gly Glu Gly Asp Val His Ser Met Val Tyr Pro Pro Ser Ala
340 345 350
Ala Lys Met Ala Ser Thr Leu Pro Ser Leu Ser Glu Ile Ser Asn Pro
355 360 365
Glu Asn Met Glu Asn Leu Leu Asp Asn Leu Asn Leu Leu Ser Ser Pro
370 375 380
Thr Ser Leu Thr Val Ser Thr Gln Ser Ser Pro Gly Thr Met Met Gln
385 390 395 400
Gln Thr Pro Cys Tyr Ser Phe Ala Pro Pro Asn Thr Ser Leu Asn Ser
405 410 415
Pro Ser Pro Asn Tyr Gln Lys Tyr Thr Tyr Gly Gln Ser Ser Met Ser
420 425 430
Pro Leu Pro Gln Met Pro Ile Gln Thr Leu Gln Asp Asn Lys Ser Ser
435 440 445
Tyr Gly Gly Met Ser Gln Tyr Asn Cys Ala Pro Gly Leu Leu Lys Glu
450 455 460
Leu Leu Thr Ser Asp Ser Pro Pro His Asn Asp Ile Met Thr Pro Val
465 470 475 480
Asp Pro Gly Val Ala Gln Pro Asn Ser Arg Val Leu Gly Gln Asn Val
485 490 495
Met Met Gly Pro Asn Ser Val Met Ser Thr Tyr Gly Ser Gln Ala Ser
500 505 510
His Asn Lys Met Met Asn Pro Ser Ser His Thr His Pro Gly His Ala
515 520 525
Gln Gln Thr Ser Ala Val Asn Gly Arg Pro Leu Pro His Thr Val Ser
530 535 540
Thr Met Pro His Thr Ser Gly Met Asn Arg Leu Thr Gln Val Lys Thr
545 550 555 560
Pro Val Gln Val Pro Leu Pro His Pro Met Gln Met Ser Ala Leu Gly
565 570 575
Gly Tyr Ser Ser Val Ser Ser Cys Asn Gly Tyr Gly Arg Met Gly Leu
580 585 590
Leu His Gln Glu Lys Leu Pro Ser Asp Leu Asp Gly Met Phe Ile Glu
595 600 605
Arg Leu Asp Cys Asp Met Glu Ser Ile Ile Arg Asn Asp Leu Met Asp
610 615 620
Gly Asp Thr Leu Asp Phe Asn Phe Asp Asn Val Leu Pro Asn Gln Ser
625 630 635 640
Phe Pro His Ser Val Lys Thr Thr Thr His Ser Trp Val Ser Gly
645 650 655

<210> 58

<211> 98

<212> PRT

<213> Caenorhabditis elegans

<400> 58

Lys Pro Asn Pro Trp Gly Glu Glu Ser Tyr Ser Asp Ile Ile Ala Lys
 1 5 10 15
 Ala Leu Glu Ser Ala Pro Asp Gly Arg Leu Lys Leu Asn Glu Ile Tyr
 20 25 30
 Gln Trp Phe Ser Asp Asn Ile Pro Tyr Phe Gly Glu Arg Ser Ser Pro
 35 40 45
 Glu Glu Ala Ala Gly Trp Lys Asn Ser Ile Arg His Asn Leu Ser Leu
 50 55 60
 His Ser Arg Phe Met Arg Ile Gln Asn Glu Gly Ala Gly Lys Ser Ser
 65 70 75 80
 Trp Trp Val Ile Asn Pro Asp Ala Lys Pro Gly Met Asn Pro Arg Arg
 85 90 95
 Thr Arg

<210> 59
 <211> 7
 <212> PRT
 <213> Caenorhabditis elegans

<400> 59
 Trp Lys Asn Ser Ile Arg His
 1 5

<210> 60
 <211> 121
 <212> PRT
 <213> Caenorhabditis elegans

<400> 60
 Gln Val Leu Asp Asp His Asp Tyr Gly Arg Cys Val Asp Trp Trp Gly
 1 5 10 15
 Val Gly Val Val Met Tyr Glu Met Met Cys Gly Arg Leu Pro Phe Tyr
 20 25 30
 Ser Lys Asp His Asn Lys Leu Phe Glu Leu Ile Met Ala Gly Asp Leu
 35 40 45
 Arg Phe Pro Ser Lys Leu Ser Gln Glu Ala Arg Thr Leu Leu Thr Gly
 50 55 60
 Leu Leu Val Lys Asp Pro Thr Gln Arg Leu Gly Gly Gly Pro Glu Asp
 65 70 75 80
 Ala Leu Glu Ile Cys Arg Ala Asp Phe Phe Arg Thr Val Asp Trp Glu
 85 90 95
 Ala Thr Tyr Arg Lys Glu Ile Glu Pro Pro Tyr Lys Pro Asn Val Gln
 100 105 110
 Ser Glu Thr Asp Thr Ser Tyr Phe Asp
 115 120

<210> 61
 <211> 66
 <212> PRT
 <213> Caenorhabditis elegans

<400> 61
 Thr Met Glu Asp Phe Asp Phe Leu Lys Val Leu Gly Lys Gly Thr Phe
 1 5 10 15

Gly Lys Val Ile Leu Cys Lys Glu Lys Arg Thr Gln Lys Leu Tyr Ala
 20 25 30
 Ile Lys Ile Leu Lys Lys Asp Val Ile Ile Ala Arg Glu Glu Val Ala
 35 40 45
 His Thr Leu Thr Glu Asn Arg Val Leu Gln Arg Cys Lys His Pro Phe
 50 55 60
 Leu Thr
 65

<210> 62
 <211> 45
 <212> PRT
 <213> Caenorhabditis elegans

<400> 62
 Lys Leu Glu Asn Leu Leu Leu Asp Lys Asp Gly His Ile Lys Ile Ala
 1 5 10 15
 Asp Phe Gly Leu Cys Lys Glu Glu Ile Ser Phe Gly Asp Lys Thr Ser
 20 25 30
 Thr Phe Cys Gly Thr Pro Glu Tyr Leu Ala Pro Glu Val
 35 40 45

<210> 63
 <211> 57
 <212> PRT
 <213> Caenorhabditis elegans

<400> 63
 Tyr Phe Gln Glu Leu Lys Tyr Ser Phe Gln Glu Gln His Tyr Leu Cys
 1 5 10 15
 Phe Val Met Gln Phe Ala Asn Gly Gly Glu Leu Phe Thr His Val Arg
 20 25 30
 Lys Cys Gly Thr Phe Ser Glu Pro Arg Ala Arg Phe Tyr Gly Ala Glu
 35 40 45
 Ile Val Leu Ala Leu Gly Tyr Leu His
 50 55

<210> 64
 <211> 59
 <212> PRT
 <213> Caenorhabditis elegans

<400> 64
 Ser Thr Phe Ala Ile Phe Tyr Phe Gln Thr Met Leu Phe Glu Lys Pro
 1 5 10 15
 Arg Pro Asn Met Phe Met Val Arg Cys Leu Gln Trp Thr Thr Val Ile
 20 25 30
 Glu Arg Thr Phe Tyr Ala Glu Ser Ala Glu Val Arg Gln Arg Trp Ile
 35 40 45
 His Ala Ile Glu Ser Ile Ser Lys Lys Tyr Lys
 50 55

<210> 65
 <211> 33

<212> PRT
 <213> Caenorhabditis elegans

<400> 65
 Leu Gln Glu Leu Lys Tyr Ser Phe Gln Thr Asn Asp Arg Leu Cys Phe
 1 5 10 15
 Val Met Glu Phe Ala Ile Gly Gly Asp Leu Tyr Tyr His Leu Asn Arg
 20 25 30
 Glu

<210> 66
 <211> 21
 <212> PRT
 <213> Caenorhabditis elegans

<400> 66
 Val Val Ile Glu Gly Trp Leu His Lys Lys Gly Glu His Ile Arg Asn
 1 5 10 15
 Trp Arg Pro Arg Phe
 20

<210> 67
 <211> 26
 <212> PRT
 <213> Caenorhabditis elegans

<400> 67
 Phe Ser Glu Pro Arg Ala Arg Phe Tyr Gly Ser Glu Ile Val Leu Ala
 1 5 10 15
 Leu Gly Tyr Leu His Ala Asn Ser Ile Val
 20 25

<210> 68
 <211> 39
 <212> PRT
 <213> Caenorhabditis elegans

<400> 68
 Ile Arg Val Ser Phe Cys Lys Gly Phe Gly Glu Thr Tyr Ser Arg Leu
 1 5 10 15
 Lys Val Val Asn Leu Pro Cys Trp Ile Glu Ile Ile Leu His Glu Pro
 20 25 30
 Ala Asp Glu Tyr Asp Thr Val
 35

<210> 69
 <211> 45
 <212> PRT
 <213> Caenorhabditis elegans

<400> 69
 Ser Arg Asn Ser Lys Ser Ser Gln Ile Arg Asn Thr Val Gly Ala Gly
 1 5 10 15

Ile Gln Leu Ala Tyr Glu Asn Gly Glu Leu Trp Leu Thr Val Leu Thr
 20 25 30
 Asp Gln Ile Val Phe Val Gln Cys Pro Phe Leu Asn Gln
 35 40 45

<210> 70
 <211> 29
 <212> PRT
 <213> Caenorhabditis elegans

<400> 70
 Asn Glu Met Leu Asp Pro Glu Pro Lys Tyr Pro Lys Glu Glu Lys Pro
 1 5 10 15
 Trp Cys Thr Ile Phe Tyr Tyr Glu Leu Thr Val Arg Val
 20 25

<210> 71
 <211> 29
 <212> PRT
 <213> Caenorhabditis elegans

<400> 71
 Gln Leu Gly Lys Ala Phe Glu Ala Lys Val Pro Thr Ile Thr Ile Asp
 1 5 10 15
 Gly Ala Thr Gly Ala Ser Asp Glu Cys Arg Met Ser Leu
 20 25

<210> 72
 <211> 105
 <212> PRT
 <213> Caenorhabditis elegans

<400> 72
 Ser Pro Asp Asp Gly Leu Leu Asp Ser Ser Glu Glu Ser Arg Arg Arg
 1 5 10 15
 Gln Lys Thr Cys Arg Val Cys Gly Asp His Ala Thr Gly Tyr Asn Phe
 20 25 30
 Asn Val Ile Thr Cys Glu Ser Cys Lys Ala Phe Phe Arg Arg Asn Ala
 35 40 45
 Leu Arg Pro Lys Glu Phe Lys Cys Pro Tyr Ser Glu Asp Cys Glu Ile
 50 55 60
 Asn Ser Val Ser Arg Arg Phe Cys Gln Lys Cys Arg Leu Arg Lys Cys
 65 70 75 80
 Phe Thr Val Gly Met Lys Lys Glu Trp Ile Leu Asn Glu Glu Gln Leu
 85 90 95
 Arg Arg Arg Lys Asn Ser Arg Leu Asn
 100 105

<210> 73
 <211> 89
 <212> PRT
 <213> Caenorhabditis elegans

<400> 73

Leu Asp Ser Ser Glu Glu Ser Arg Arg Arg Gln Lys Thr Cys Arg Val
 1 5 10 15
 Cys Gly Asp His Ala Thr Gly Tyr Asn Phe Asn Val Ile Thr Cys Glu
 20 25 30
 Ser Cys Lys Ala Phe Phe Arg Arg Asn Ala Leu Arg Pro Lys Glu Phe
 35 40 45
 Lys Cys Pro Tyr Ser Glu Asp Cys Glu Ile Asn Ser Val Ser Arg Arg
 50 55 60
 Phe Cys Gln Lys Cys Arg Leu Arg Lys Cys Phe Thr Val Gly Met Lys
 65 70 75 80
 Lys Glu Trp Ile Leu Asn Glu Glu Gln
 85

<210> 74
 <211> 73
 <212> PRT
 <213> Caenorhabditis elegans

<400> 74
 Asp Ile Met Asn Ile Met Asp Val Thr Met Arg Arg Phe Val Lys Val
 1 5 10 15
 Ala Lys Gly Val Pro Ala Phe Arg Glu Val Ser Gln Glu Gly Lys Phe
 20 25 30
 Ser Leu Leu Lys Gly Gly Met Ile Glu Met Leu Thr Val Arg Gly Val
 35 40 45
 Thr Arg Tyr Asp Ala Ser Thr Asn Ser Phe Lys Thr Pro Thr Ile Lys
 50 55 60
 Gly Gln Asn Val Ser Val Asn Val Asp
 65 70

<210> 75
 <211> 112
 <212> PRT
 <213> Caenorhabditis elegans

<400> 75
 Ser Gly Ser Leu Val Asp Leu Met Ile Lys Asn Leu Thr Ala Tyr Thr
 1 5 10 15
 Gln Gly Leu Asn Glu Thr Val Lys Asn Arg Thr Ala Glu Leu Glu Lys
 20 25 30
 Glu Gln Glu Lys Gly Asp Gln Leu Leu Met Glu Leu Leu Pro Lys Ser
 35 40 45
 Val Ala Asn Asp Leu Lys Asn Gly Ile Ala Val Asp Pro Lys Val Tyr
 50 55 60
 Glu Asn Ala Thr Ile Leu Tyr Ser Asp Ile Val Gly Phe Thr Ser Leu
 65 70 75 80
 Cys Ser Gln Ser Gln Pro Met Glu Val Val Thr Leu Leu Ser Gly Met
 85 90 95
 Tyr Gln Arg Phe Asp Leu Ile Ile Ser Gln Gln Gly Gly Tyr Lys Val
 100 105 110

<210> 76
 <211> 107
 <212> PRT
 <213> Caenorhabditis elegans

<400> 76

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Met Glu Thr Ile Gly Asp Ala Tyr Cys Val Ala Ala Gly Leu Pro Val
 1           5           10           15
Val Met Glu Lys Asp His Val Lys Ser Ile Cys Met Ile Ala Leu Leu
           20           25           30
Gln Arg Asp Cys Leu His His Phe Glu Ile Pro His Arg Pro Gly Thr
           35           40           45
Phe Leu Asn Cys Arg Trp Gly Phe Asn Ser Gly Pro Val Phe Ala Gly
           50           55           60
Val Ile Gly Gln Lys Ala Pro Arg Tyr Ala Cys Phe Gly Glu Ala Val
           65           70           75           80
Ile Leu Ala Ser Lys Met Glu Ser Ser Gly Val Glu Asp Arg Ile Gln
           85           90           95
Met Thr Leu Ala Ser Gln Gln Leu Leu Glu Glu
           100           105

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<210> 77

<211> 43

<212> PRT

<213> Caenorhabditis elegans

<400> 77

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Asp Ile Leu Lys Gly Leu Glu Tyr Ile His Ala Ser Ala Ile Asp Phe
 1           5           10           15
His Gly Asn Leu Thr Leu His Asn Cys Met Leu Asp Ser His Trp Ile
           20           25           30
Val Lys Leu Ser Gly Phe Gly Val Asn Arg Leu
           35           40

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<210> 78

<211> 15

<212> PRT

<213> Caenorhabditis elegans

<400> 78

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Asp Met Tyr Ser Phe Gly Val Ile Leu His Glu Ile Ile Leu Lys
 1           5           10           15

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<210> 79

<211> 67

<212> PRT

<213> Caenorhabditis elegans

<400> 79

```

Ala Ile Lys Ile Asn Val Asp Asp Pro Ala Ser Thr Glu Asn Leu Asn
 1           5           10           15
Tyr Leu Met Glu Ala Asn Ile Met Lys Asn Phe Lys Thr Asn Phe Ile
           20           25           30
Val Gln Leu Tyr Gly Val Ile Ser Thr Val Gln Pro Ala Met Val Val
           35           40           45
Met Glu Met Met Asp Leu Gly Asn Leu Arg Asp Tyr Leu Arg Ser Lys
           50           55           60
Arg Glu Asp
           65

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<210> 80
 <211> 54
 <212> PRT
 <213> Caenorhabditis elegans

<400> 80
 Val Ile Lys Lys Pro Glu Cys Cys Glu Asn Tyr Trp Tyr Lys Val Met
 1 5 10 15
 Lys Met Cys Trp Arg Tyr Ser Pro Arg Asp Arg Pro Thr Phe Leu Gln
 20 25 30
 Leu Val His Leu Leu Ala Ala Glu Ala Ser Pro Glu Phe Arg Asp Leu
 35 40 45
 Ser Phe Val Leu Thr Asp
 50

<210> 81
 <211> 69
 <212> PRT
 <213> Caenorhabditis elegans

<400> 81
 Lys Gln Asp Ser Gly Met Ala Ser Glu Leu Lys Asp Ile Phe Ala Asn
 1 5 10 15
 Ile His Thr Ile Thr Gly Tyr Leu Leu Val Arg Gln Ser Ser Pro Phe
 20 25 30
 Ile Ser Leu Asn Met Phe Arg Asn Leu Arg Arg Ile Glu Ala Lys Ser
 35 40 45
 Leu Phe Arg Asn Leu Tyr Ala Ile Thr Val Phe Glu Asn Pro Asn Leu
 50 55 60
 Lys Lys Leu Phe Asp
 65

<210> 82
 <211> 52
 <212> PRT
 <213> Caenorhabditis elegans

<400> 82
 Phe Pro His Leu Arg Glu Ile Thr Gly Thr Leu Leu Val Phe Glu Thr
 1 5 10 15
 Glu Gly Leu Val Asp Leu Arg Lys Ile Phe Pro Asn Leu Arg Val Ile
 20 25 30
 Gly Gly Arg Ser Leu Ile Gln His Tyr Ala Leu Ile Ile Tyr Arg Asn
 35 40 45
 Pro Asp Leu Glu
 50

<210> 83
 <211> 46
 <212> PRT
 <213> Caenorhabditis elegans

<400> 83
 Glu Ile Gly Leu Asp Lys Leu Ser Val Ile Arg Asn Gly Gly Val Arg
 1 5 10 15

Ile Ile Asp Asn Arg Lys Leu Cys Tyr Thr Lys Thr Ile Asp Trp Lys
 20 25 30
 His Leu Ile Thr Ser Ser Ile Asn Asp Val Val Val Asp Asn
 35 40 45

<210> 84
 <211> 36
 <212> PRT
 <213> Caenorhabditis elegans

<400> 84
 Tyr Asn Ala Asp Asp Trp Glu Leu Arg Gln Asp Asp Val Val Leu Gly
 1 5 10 15
 Gln Gln Cys Gly Glu Gly Ser Phe Gly Lys Val Tyr Leu Gly Thr Gly
 20 25 30
 Asn Asn Val Val
 35

<210> 85
 <211> 24
 <212> PRT
 <213> Caenorhabditis elegans

<400> 85
 Asp Ser Leu Ala Lys Tyr Cys Cys Val Arg Val Ser Phe Cys Lys Gly
 1 5 10 15
 Phe Gly Glu Ala Tyr Pro Glu Arg
 20

<210> 86
 <211> 13
 <212> PRT
 <213> Caenorhabditis elegans

<400> 86
 Gly Trp Asp Trp Ile Val Ala Pro Pro Arg Tyr Asn Ala
 1 5 10

<210> 87
 <211> 121
 <212> PRT
 <213> Homo sapiens

<400> 87
 Glu Val Leu Glu Asp Asn Asp Tyr Gly Arg Ala Val Asp Trp Trp Gly
 1 5 10 15
 Leu Gly Val Val Met Tyr Glu Met Met Cys Gly Arg Leu Pro Phe Tyr
 20 25 30
 Asn Gln Asp His Glu Lys Leu Phe Glu Leu Ile Leu Met Glu Glu Ile
 35 40 45
 Arg Phe Pro Arg Thr Leu Gly Pro Glu Ala Lys Ser Leu Leu Ser Gly
 50 55 60
 Leu Leu Lys Lys Asp Pro Thr Gln Arg Leu Gly Gly Gly Ser Glu Asp
 65 70 75 80

Ala Lys Glu Ile Met Gln His Arg Phe Phe Ala Asn Ile Val Trp Gln
 85 90 95
 Asp Val Tyr Glu Lys Lys Leu Ser Pro Phe Lys Pro Gln Val Thr
 100 105 110
 Ser Glu Thr Asp Thr Arg Tyr Phe Asp
 115 120

<210> 88
 <211> 121
 <212> PRT
 <213> *Caenorhabditis elegans*

<400> 88
 Gln Val Leu Asp Asp His Asp Tyr Gly Arg Cys Val Asp Trp Trp Gly
 1 5 10 15
 Val Gly Val Val Met Tyr Glu Met Met Cys Gly Arg Leu Pro Phe Tyr
 20 25 30
 Ser Lys Asp His Asn Lys Leu Phe Glu Leu Ile Met Ala Gly Asp Leu
 35 40 45
 Arg Phe Pro Ser Lys Leu Ser Gln Glu Ala Arg Thr Leu Leu Thr Gly
 50 55 60
 Leu Leu Val Lys Asp Pro Thr Gln Arg Leu Gly Gly Gly Pro Glu Asp
 65 70 75 80
 Ala Leu Glu Ile Cys Arg Ala Asp Phe Phe Arg Thr Val Asp Trp Glu
 85 90 95
 Ala Thr Tyr Arg Lys Glu Ile Glu Pro Pro Tyr Lys Pro Asn Val Gln
 100 105 110
 Ser Glu Thr Asp Thr Ser Tyr Phe Asp
 115 120

<210> 89
 <211> 66
 <212> PRT
 <213> *Homo sapiens*

<400> 89
 Thr Met Asn Glu Phe Glu Tyr Leu Lys Leu Leu Gly Lys Gly Thr Phe
 1 5 10 15
 Gly Lys Val Ile Leu Val Lys Glu Lys Ala Thr Gly Arg Tyr Tyr Ala
 20 25 30
 Met Lys Ile Leu Lys Lys Glu Val Ile Val Ala Lys Asp Glu Val Ala
 35 40 45
 His Thr Leu Thr Glu Asn Arg Val Leu Gln Asn Ser Arg His Pro Phe
 50 55 60
 Leu Thr
 65

<210> 90
 <211> 66
 <212> PRT
 <213> *Caenorhabditis elegans*

<400> 90
 Thr Met Glu Asp Phe Asp Phe Leu Lys Val Leu Gly Lys Gly Thr Phe
 1 5 10 15

<400> 94

Tyr Phe Gln Glu Leu Lys Tyr Ser Phe Gln Glu Gln His Tyr Leu Cys
 1 5 10 15
 Phe Val Met Gln Phe Ala Asn Gly Gly Glu Leu Phe Thr His Val Arg
 20 25 30
 Lys Cys Gly Thr Phe Ser Glu Pro Arg Ala Arg Phe Tyr Gly Ala Glu
 35 40 45
 Ile Val Leu Ala Leu Gly Tyr Leu His
 50 55

<210> 95

<211> 59

<212> PRT

<213> Homo sapiens

<400> 95

Asn Asn Phe Ser Val Ala Gln Cys Gln Leu Met Lys Thr Glu Arg Pro
 1 5 10 15
 Arg Pro Asn Thr Phe Ile Ile Arg Cys Leu Gln Trp Thr Thr Val Ile
 20 25 30
 Glu Arg Thr Phe His Val Glu Thr Pro Glu Glu Arg Glu Glu Trp Ala
 35 40 45
 Thr Ala Ile Gln Thr Val Ala Asp Gly Leu Lys
 50 55

<210> 96

<211> 59

<212> PRT

<213> Caenorhabditis elegans

<400> 96

Ser Thr Phe Ala Ile Phe Tyr Phe Gln Thr Met Leu Phe Glu Lys Pro
 1 5 10 15
 Arg Pro Asn Met Phe Met Val Arg Cys Leu Gln Trp Thr Thr Val Ile
 20 25 30
 Glu Arg Thr Phe Tyr Ala Glu Ser Ala Glu Val Arg Gln Arg Trp Ile
 35 40 45
 His Ala Ile Glu Ser Ile Ser Lys Lys Tyr Lys
 50 55

<210> 97

<211> 33

<212> PRT

<213> Homo sapiens

<400> 97

Leu Thr Ala Leu Lys Tyr Ser Phe Gln Thr His Asp Arg Leu Cys Phe
 1 5 10 15
 Val Met Glu Tyr Ala Asn Gly Gly Glu Leu Phe Phe His Leu Ser Arg
 20 25 30
 Glu

<210> 98

<211> 33
 <212> PRT
 <213> Caenorhabditis elegans

<400> 98

Leu	Gln	Glu	Leu	Lys	Tyr	Ser	Phe	Gln	Thr	Asn	Asp	Arg	Leu	Cys	Phe
1				5					10					15	
Val	Met	Glu	Phe	Ala	Ile	Gly	Gly	Asp	Leu	Tyr	Tyr	His	Leu	Asn	Arg
			20					25					30		
Glu															

<210> 99
 <211> 473
 <212> PRT
 <213> Homo sapiens

<400> 99

Met	Leu	Gly	Thr	Val	Lys	Met	Glu	Gly	His	Glu	Thr	Ser	Asp	Trp	Asn
1				5					10					15	
Ser	Tyr	Tyr	Ala	Asp	Thr	Gln	Glu	Ala	Tyr	Ser	Ser	Val	Pro	Val	Ser
			20					25					30		
Asn	Met	Asn	Ser	Gly	Leu	Gly	Ser	Met	Asn	Ser	Met	Asn	Thr	Tyr	Met
		35				40						45			
Thr	Met	Asn	Thr	Met	Thr	Thr	Ser	Gly	Asn	Met	Thr	Pro	Ala	Ser	Phe
	50				55						60				
Asn	Met	Ser	Tyr	Ala	Asn	Pro	Ala	Leu	Gly	Ala	Gly	Leu	Ser	Pro	Gly
65					70					75					80
Ala	Val	Ala	Gly	Met	Pro	Gly	Gly	Ser	Ala	Gly	Ala	Met	Asn	Ser	Met
				85					90					95	
Thr	Ala	Ala	Gly	Val	Thr	Ala	Met	Gly	Thr	Ala	Leu	Ser	Pro	Ser	Gly
			100					105					110		
Met	Gly	Ala	Met	Gly	Ala	Gln	Gln	Ala	Ala	Ser	Met	Met	Asn	Gly	Leu
		115				120						125			
Gly	Pro	Tyr	Ala	Ala	Ala	Met	Asn	Pro	Cys	Met	Ser	Pro	Met	Ala	Tyr
	130					135					140				
Ala	Pro	Ser	Asn	Leu	Gly	Arg	Ser	Arg	Ala	Gly	Gly	Gly	Gly	Asp	Ala
145					150					155					160
Lys	Thr	Phe	Lys	Arg	Ser	Tyr	Pro	His	Ala	Lys	Pro	Pro	Tyr	Ser	Tyr
			165						170					175	
Ile	Ser	Leu	Ile	Thr	Met	Ala	Ile	Gln	Arg	Ala	Pro	Ser	Lys	Met	Leu
		180						185					190		
Thr	Leu	Ser	Glu	Ile	Tyr	Gln	Trp	Ile	Met	Asp	Leu	Phe	Pro	Tyr	Tyr
		195					200					205			
Arg	Gln	Asn	Gln	Gln	Arg	Trp	Gln	Asn	Ser	Ile	Arg	His	Ser	Leu	Ser
	210					215					220				
Phe	Asn	Asp	Cys	Phe	Val	Lys	Val	Ala	Arg	Ser	Pro	Asp	Lys	Pro	Gly
225					230					235					240
Lys	Gly	Ser	Tyr	Trp	Thr	Leu	His	Pro	Asp	Ser	Gly	Asn	Met	Phe	Glu
			245						250					255	
Asn	Gly	Cys	Tyr	Leu	Arg	Arg	Gln	Lys	Arg	Phe	Lys	Cys	Glu	Lys	Gln
			260					265					270		
Pro	Gly	Ala	Gly	Gly	Gly	Gly	Gly	Ser	Gly	Ser	Gly	Gly	Ser	Gly	Ala
		275					280					285			
Lys	Gly	Gly	Pro	Glu	Ser	Arg	Lys	Asp	Pro	Ser	Gly	Ala	Ser	Asn	Pro
	290					295					300				
Ser	Ala	Asp	Ser	Pro	Leu	His	Arg	Gly	Val	His	Gly	Lys	Thr	Gly	Gln

305 310 315 320
 Leu Glu Gly Ala Pro Ala Pro Gly Pro Ala Ala Ser Pro Gln Thr Leu
 325 330 335
 Asp His Ser Gly Ala Thr Ala Thr Gly Gly Ala Ser Glu Leu Lys Thr
 340 345 350
 Pro Ala Ser Ser Thr Ala Pro Pro Ile Ser Ser Gly Pro Gly Ala Leu
 355 360 365
 Ala Ser Val Pro Ala Ser His Pro Ala His Gly Leu Ala Pro His Glu
 370 375 380
 Ser Gln Leu His Leu Lys Gly Asp Pro His Tyr Ser Phe Asn His Pro
 385 390 395 400
 Phe Ser Ile Asn Asn Leu Met Ser Ser Ser Glu Gln Gln His Lys Leu
 405 410 415
 Asp Phe Lys Ala Tyr Glu Gln Ala Leu Gln Tyr Ser Pro Tyr Gly Ser
 420 425 430
 Thr Leu Pro Ala Ser Leu Pro Leu Gly Ser Ala Ser Val Thr Thr Arg
 435 440 445
 Ser Pro Ile Glu Pro Ser Ala Leu Glu Pro Ala Tyr Tyr Gln Gly Val
 450 455 460
 Tyr Ser Arg Pro Val Leu Asn Thr Ser
 465 470

<210> 100
 <211> 347
 <212> PRT
 <213> Homo sapiens

<400> 100
 Met Leu Gly Ser Val Lys Met Glu Ala His Asp Leu Ala Glu Trp Ser
 1 5 10 15
 Tyr Tyr Pro Glu Ala Gly Glu Val Tyr Ser Pro Val Thr Pro Val Pro
 20 25 30
 Thr Met Ala Pro Leu Asn Ser Tyr Met Thr Leu Asn Pro Leu Ser Ser
 35 40 45
 Pro Tyr Pro Gly Gly Leu Pro Ala Ser Pro Leu Pro Ser Gly Pro Leu
 50 55 60
 Ala Pro Pro Ala Pro Ala Ala Pro Leu Gly Pro Thr Phe Pro Gly Leu
 65 70 75 80
 Gly Leu Ser Gly Gly Ser Ser Ser Ser Gly Tyr Gly Ala Pro Gly Pro
 85 90 95
 Gly Leu Val His Gly Lys Glu Met Pro Lys Gly Tyr Arg Ala Pro Ala
 100 105 110
 His Ala Lys Pro Pro Tyr Ser Tyr Ile Ser Leu Ile Thr Met Ala Ile
 115 120 125
 Gln Gln Ala Pro Gly Lys Val Leu Thr Leu Ser Glu Ile Tyr Gln Trp
 130 135 140
 Ile Met Asp Leu Phe Pro Tyr Tyr Arg Asp Asn Gln Gln Arg Trp Gln
 145 150 155 160
 Asn Ser Ile Arg His Ser Leu Ser Phe Asn Asp Cys Phe Val Lys Val
 165 170 175
 Ala Arg Ser Pro Asp Lys Pro Gly Lys Gly Ser Tyr Trp Ala Leu His
 180 185 190
 Pro Ser Ser Gly Asn Met Phe Glu Asn Gly Cys Tyr Leu Arg Arg Gln
 195 200 205
 Lys Arg Phe Lys Leu Glu Glu Lys Val Lys Lys Gly Gly Ser Gly Ala
 210 215 220
 Ser Thr Thr Arg Asn Gly Thr Gly Ser Ala Ala Ser Thr Thr Thr Pro

225					230					235				240
Ala	Ala	Thr	Val	Thr	Ser	Pro	Pro	Gln	Pro	Pro	Pro	Pro	Ala	Pro
				245					250					255
Pro	Glu	Ala	Gln	Gly	Gly	Glu	Asp	Val	Gly	Ala	Leu	Asp	Cys	Gly
			260					265					270	
Pro	Ala	Ser	Ser	Thr	Pro	Tyr	Phe	Thr	Gly	Leu	Glu	Leu	Pro	Gly
		275					280					285		
Leu	Lys	Leu	Asp	Ala	Pro	Tyr	Asn	Phe	Asn	His	Pro	Phe	Ser	Ile
	290					295					300			
Asn	Leu	Met	Ser	Glu	Gln	Thr	Pro	Ala	Pro	Pro	Lys	Leu	Asp	Val
305					310					315				320
Phe	Gly	Gly	Tyr	Gly	Ala	Glu	Gly	Gly	Glu	Pro	Gly	Val	Tyr	Tyr
			325					330						335
Gly	Leu	Tyr	Ser	Arg	Ser	Leu	Leu	Asn	Ala	Ser				
			340					345						

<210> 101
 <211> 635
 <212> PRT
 <213> Caenorhabditis elegans

<400> 101

Met	Met	Glu	Met	Leu	Val	Asp	Gln	Gly	Thr	Asp	Ala	Ser	Ser	Ser	Ala
1				5					10					15	
Ser	Thr	Ser	Thr	Ser	Ser	Val	Ser	Arg	Phe	Gly	Ala	Asp	Thr	Phe	Met
			20					25					30		
Asn	Thr	Pro	Asp	Asp	Val	Met	Met	Asn	Asp	Asp	Met	Glu	Pro	Ile	Pro
		35				40						45			
Arg	Asp	Arg	Cys	Asn	Thr	Trp	Pro	Met	Arg	Arg	Pro	Gln	Leu	Glu	Pro
	50				55					60					
Pro	Leu	Asn	Ser	Ser	Pro	Ile	Ile	His	Glu	Gln	Ile	Pro	Glu	Glu	Asp
	65				70					75					80
Ala	Asp	Leu	Tyr	Gly	Ser	Asn	Glu	Gln	Cys	Gly	Gln	Leu	Gly	Gly	Ala
				85					90					95	
Ser	Ser	Asn	Gly	Ser	Thr	Ala	Met	Leu	His	Thr	Pro	Asp	Gly	Ser	Asn
		100					105						110		
Ser	His	Gln	Thr	Ser	Phe	Pro	Ser	Glu	Cys	Tyr	Thr	Trp	Pro	Met	Gln
	115					120					125				
Gln	Tyr	Ile	Tyr	Gln	Glu	Ser	Ala	Thr	Ile	Pro	His	His	His	His	Leu
	130				135					140					
Asn	Gln	His	Asn	Asn	Pro	Tyr	His	Pro	Met	His	Pro	His	His	Gln	Leu
145				150					155						160
Pro	His	Met	Gln	Gln	Leu	Pro	Gln	Pro	Leu	Leu	Asn	Leu	Asn	Met	Thr
			165					170						175	
Thr	Leu	Thr	Ser	Ser	Gly	Ser	Ser	Val	Ala	Ser	Ser	Ile	Gly	Gly	Gly
		180					185						190		
Ala	Gln	Cys	Ser	Pro	Cys	Ala	Ser	Gly	Ser	Ser	Thr	Ala	Ala	Thr	Asn
	195					200					205				
Ser	Ser	Gln	Gln	Gln	Gln	Thr	Val	Gly	Gln	Met	Leu	Ala	Ala	Ser	Val
	210				215						220				
Pro	Cys	Ser	Ser	Ser	Gly	Met	Thr	Leu	Gly	Met	Ser	Leu	Asn	Leu	Ser
225				230					235						240
Gln	Gly	Gly	Gly	Pro	Met	Pro	Ala	Lys	Lys	Lys	Arg	Cys	Arg	Lys	Lys
			245					250						255	
Pro	Thr	Asp	Gln	Leu	Ala	Gln	Lys	Lys	Pro	Asn	Pro	Trp	Gly	Glu	Glu
		260					265						270		
Ser	Tyr	Ser	Asp	Ile	Ile	Ala	Lys	Ala	Leu	Glu	Ser	Ala	Pro	Asp	Gly

Arg	Leu	275	Lys	Leu	Asn	Glu	Ile	280	Tyr	Gln	Trp	Phe	Ser	285	Asp	Asn	Ile	Pro
	290							295					300					
Tyr	Phe	Gly	Glu	Arg	Ser	Ser	Pro	Glu	Glu	Ala	Ala	Gly	Trp	Lys	Asn			
305					310					315					320			
Ser	Ile	Arg	His	Asn	Leu	Ser	Leu	His	Ser	Arg	Phe	Met	Arg	Ile	Gln			
				325					330					335				
Asn	Glu	Gly	Ala	Gly	Lys	Ser	Ser	Trp	Trp	Val	Ile	Asn	Pro	Asp	Ala			
			340					345					350					
Lys	Pro	Gly	Met	Asn	Pro	Arg	Arg	Thr	Arg	Glu	Arg	Ser	Asn	Thr	Ile			
		355					360					365						
Glu	Thr	Thr	Thr	Lys	Ala	Gln	Leu	Glu	Lys	Ser	Arg	Arg	Gly	Ala	Lys			
	370					375					380							
Lys	Arg	Ile	Lys	Glu	Arg	Ala	Leu	Met	Gly	Ser	Leu	His	Ser	Thr	Leu			
385					390				395						400			
Asn	Gly	Asn	Ser	Ile	Ala	Gly	Ser	Ile	Gln	Thr	Ile	Ser	His	Asp	Leu			
				405					410					415				
Tyr	Asp	Asp	Asp	Ser	Met	Gln	Gly	Ala	Phe	Asp	Asn	Val	Pro	Ser	Ser			
			420					425					430					
Phe	Arg	Pro	Arg	Thr	Gln	Ser	Asn	Leu	Ser	Ile	Pro	Gly	Ser	Ser	Ser			
		435					440					445						
Arg	Val	Ser	Pro	Ala	Ile	Gly	Ser	Asp	Ile	Tyr	Asp	Asp	Leu	Glu	Phe			
	450					455					460							
Pro	Ser	Trp	Val	Gly	Glu	Ser	Val	Pro	Ala	Ile	Pro	Ser	Asp	Ile	Val			
465					470					475					480			
Asp	Arg	Thr	Asp	Gln	Met	Arg	Ile	Asp	Ala	Thr	Thr	His	Ile	Gly	Gly			
				485					490					495				
Val	Gln	Ile	Lys	Gln	Glu	Ser	Lys	Pro	Ile	Lys	Thr	Glu	Pro	Ile	Ala			
			500					505					510					
Pro	Pro	Pro	Ser	Tyr	His	Glu	Leu	Asn	Ser	Val	Arg	Gly	Ser	Cys	Ala			
		515					520					525						
Gln	Asn	Pro	Leu	Leu	Arg	Asn	Pro	Ile	Val	Pro	Ser	Thr	Asn	Phe	Lys			
	530					535					540							
Pro	Met	Pro	Leu	Pro	Gly	Ala	Tyr	Gly	Asn	Tyr	Gln	Asn	Gly	Gly	Ile			
545					550				555						560			
Thr	Pro	Ile	Asn	Trp	Leu	Ser	Thr	Ser	Asn	Ser	Ser	Pro	Leu	Pro	Gly			
			565					570						575				
Ile	Gln	Ser	Cys	Gly	Ile	Val	Ala	Ala	Gln	His	Thr	Val	Ala	Ser	Ser			
		580					585					590						
Ser	Ala	Leu	Pro	Ile	Asp	Leu	Glu	Asn	Leu	Thr	Leu	Pro	Asp	Gln	Pro			
		595					600					605						
Leu	Met	Asp	Thr	Met	Asp	Val	Asp	Ala	Leu	Ile	Arg	His	Glu	Leu	Ser			
	610				615						620							
Gln	Ala	Gly	Gly	Gln	His	Ile	His	Phe	Asp	Leu								
625					630					635								

<210> 102

<211> 501

<212> PRT

<213> Homo sapiens

<400> 102

Met	Arg	Ile	Gln	Pro	Gln	Lys	Ala	Ala	Ala	Ile	Ile	Asp	Leu	Asp	Pro
1				5				10					15		
Asp	Phe	Glu	Pro	Gln	Ser	Arg	Pro	Arg	Ser	Cys	Thr	Trp	Pro	Leu	Pro
		20					25					30			
Arg	Pro	Glu	Ile	Ala	Asn	Gln	Pro	Ser	Glu	Pro	Pro	Glu	Val	Glu	Pro

		35					40					45				
Asp	Leu	Gly	Glu	Lys	Val	His	Thr	Glu	Gly	Arg	Ser	Glu	Pro	Ile	Leu	
	50					55					60					
Leu	Pro	Ser	Arg	Leu	Ser	Glu	Pro	Ala	Gly	Gly	Pro	Gln	Pro	Gly	Ile	
65					70					75				80		
Leu	Gly	Ala	Val	Thr	Gly	Pro	Arg	Lys	Gly	Gly	Ser	Arg	Arg	Asn	Ala	
				85					90					95		
Trp	Gly	Asn	Gln	Ser	Tyr	Ala	Glu	Phe	Ile	Ser	Gln	Ala	Ile	Glu	Ser	
			100					105					110			
Ala	Pro	Glu	Lys	Arg	Leu	Thr	Leu	Ala	Gln	Ile	Tyr	Glu	Trp	Met	Val	
		115					120					125				
Arg	Thr	Val	Pro	Tyr	Phe	Lys	Asp	Lys	Gly	Asp	Ser	Asn	Ser	Ser	Ala	
	130					135					140					
Gly	Trp	Lys	Asn	Ser	Ile	Arg	His	Asn	Leu	Ser	Leu	His	Ser	Lys	Phe	
145					150					155					160	
Ile	Lys	Val	His	Asn	Glu	Ala	Thr	Gly	Lys	Ser	Ser	Trp	Trp	Met	Leu	
				165					170					175		
Asn	Pro	Glu	Gly	Gly	Lys	Ser	Gly	Lys	Ala	Pro	Arg	Arg	Arg	Ala	Ala	
			180					185				190				
Ser	Met	Asp	Ser	Ser	Ser	Lys	Leu	Leu	Arg	Gly	Arg	Ser	Lys	Ala	Pro	
		195					200					205				
Lys	Lys	Lys	Pro	Ser	Val	Leu	Pro	Ala	Pro	Pro	Glu	Gly	Ala	Thr	Pro	
	210					215					220					
Thr	Ser	Pro	Val	Gly	His	Phe	Ala	Lys	Trp	Ser	Gly	Ser	Pro	Cys	Ser	
225					230					235					240	
Arg	Asn	Arg	Glu	Glu	Ala	Asp	Met	Trp	Thr	Thr	Phe	Arg	Pro	Arg	Ser	
				245					250					255		
Ser	Ser	Asn	Ala	Ser	Ser	Val	Ser	Thr	Arg	Leu	Ser	Pro	Leu	Arg	Pro	
			260					265					270			
Glu	Ser	Glu	Val	Leu	Ala	Glu	Glu	Ile	Pro	Ala	Ser	Val	Ser	Ser	Tyr	
		275					280					285				
Ala	Gly	Gly	Val	Pro	Pro	Thr	Leu	Asn	Glu	Gly	Leu	Glu	Leu	Leu	Asp	
	290					295					300					
Gly	Leu	Asn	Leu	Thr	Ser	Ser	His	Ser	Leu	Leu	Ser	Arg	Ser	Gly	Leu	
305					310					315					320	
Ser	Gly	Phe	Ser	Leu	Gln	His	Pro	Gly	Val	Thr	Gly	Pro	Leu	His	Thr	
				325					330					335		
Tyr	Ser	Ser	Ser	Leu	Phe	Ser	Pro	Ala	Glu	Gly	Pro	Leu	Ser	Ala	Gly	
				340				345						350		
Glu	Gly	Cys	Phe	Ser	Ser	Ser	Gln	Ala	Leu	Glu	Ala	Leu	Leu	Thr	Ser	
		355					360					365				
Asp	Thr	Pro	Pro	Pro	Pro	Ala	Asp	Val	Leu	Met	Thr	Gln	Val	Asp	Pro	
	370					375					380					
Ile	Leu	Ser	Gln	Ala	Pro	Thr	Leu	Leu	Leu	Leu	Gly	Gly	Leu	Pro	Ser	
385					390					395						

<210> 103
 <211> 366
 <212> PRT
 <213> Homo sapiens

<400> 103

Arg	Gly	Ala	Ile	Arg	Ile	Glu	Lys	Asn	Ala	Asp	Leu	Cys	Tyr	Leu	Ser
1				5					10					15	
Thr	Val	Asp	Trp	Ser	Leu	Ile	Leu	Asp	Ala	Val	Ser	Asn	Asn	Tyr	Ile
		20						25					30		
Val	Gly	Asn	Lys	Pro	Pro	Lys	Glu	Cys	Gly	Asp	Leu	Cys	Pro	Gly	Thr
		35					40					45			
Met	Glu	Glu	Lys	Pro	Met	Cys	Glu	Lys	Thr	Thr	Ile	Asn	Asn	Glu	Tyr
	50					55					60				
Asn	Tyr	Arg	Cys	Trp	Thr	Thr	Asn	Arg	Cys	Gln	Lys	Met	Cys	Pro	Ser
65					70				75						80
Thr	Cys	Gly	Lys	Arg	Ala	Cys	Thr	Glu	Asn	Asn	Glu	Cys	Cys	His	Pro
				85					90					95	
Glu	Cys	Leu	Gly	Ser	Cys	Ser	Ala	Pro	Asp	Asn	Asp	Thr	Ala	Cys	Val
			100					105					110		
Ala	Cys	Arg	His	Tyr	Tyr	Tyr	Ala	Gly	Val	Cys	Val	Pro	Ala	Cys	Pro
		115					120					125			
Pro	Asn	Thr	Tyr	Arg	Phe	Glu	Gly	Trp	Arg	Cys	Val	Asp	Arg	Asp	Phe
	130					135					140				
Cys	Ala	Asn	Ile	Leu	Ser	Ala	Glu	Ser	Ser	Asp	Ser	Glu	Gly	Phe	Val
145					150					155					160
Ile	His	Asp	Gly	Glu	Cys	Met	Gln	Glu	Cys	Pro	Ser	Gly	Phe	Ile	Arg
				165					170					175	
Asn	Gly	Ser	Gln	Ser	Met	Tyr	Cys	Ile	Pro	Cys	Glu	Gly	Pro	Cys	Pro
			180					185					190		
Lys	Val	Cys	Glu	Glu	Glu	Lys	Lys	Thr	Lys	Thr	Ile	Asp	Ser	Val	Thr
		195					200					205			
Ser	Ala	Gln	Met	Leu	Gln	Gly	Cys	Thr	Ile	Phe	Lys	Gly	Asn	Leu	Leu
	210					215					220				
Ile	Asn	Ile	Arg	Arg	Gly	Asn	Asn	Ile	Ala	Ser	Glu	Leu	Glu	Asn	Phe
225					230					235					240
Met	Gly	Leu	Ile	Glu	Val	Val	Thr	Gly	Tyr	Val	Lys	Ile	Arg	His	Ser
				245					250					255	
His	Ala	Leu	Val	Ser	Leu	Ser	Phe	Leu	Lys	Asn	Leu	Arg	Leu	Ile	Leu
		260						265					270		
Gly	Glu	Glu	Gln	Leu	Glu	Gly	Asn	Tyr	Ser	Phe	Tyr	Val	Leu	Asp	Asn
		275					280					285			
Gln	Asn	Leu	Gln	Gln	Leu	Trp	Asp	Trp	Asp	His	Arg	Asn	Leu	Thr	Ile
	290					295					300				
Lys	Ala	Gly	Lys	Met	Tyr	Phe	Ala	Phe	Asn	Pro	Lys	Leu	Cys	Val	Ser
305					310					315					320
Glu	Ile	Tyr	Arg	Met	Glu	Glu	Val	Thr	Gly	Thr	Lys	Gly	Arg	Gln	Ser
				325					330					335	
Lys	Gly	Asp	Ile	Asn	Thr	Arg	Asn	Asn	Gly	Glu	Arg	Ala	Ser	Cys	Glu
			340					345					350		
Ser	Asp	Val	Leu	His	Phe	Thr	Ser	Thr	Thr	Thr	Ser	Lys	Asn		
		355					360						365		

<210> 104

<211> 370
 <212> PRT
 <213> Homo sapiens

<400> 104

Arg	Gly	Ser	Val	Arg	Ile	Glu	Lys	Asn	Asn	Glu	Leu	Cys	Tyr	Leu	Ala		
1				5				10						15			
Thr	Ile	Asp	Trp	Ser	Arg	Ile	Leu	Asp	Ser	Val	Glu	Asp	Asn	Tyr	Ile		
			20					25					30				
Val	Leu	Asn	Lys	Asp	Asp	Asn	Glu	Glu	Cys	Gly	Asp	Ile	Cys	Pro	Gly		
		35					40					45					
Thr	Ala	Lys	Gly	Lys	Thr	Asn	Cys	Pro	Ala	Thr	Val	Ile	Asn	Gly	Gln		
	50					55					60						
Phe	Val	Glu	Arg	Cys	Trp	Thr	His	Ser	His	Cys	Gln	Lys	Val	Cys	Pro		
65					70					75					80		
Thr	Ile	Cys	Lys	Ser	His	Gly	Cys	Thr	Ala	Glu	Gly	Leu	Cys	Cys	His		
				85					90					95			
Ser	Glu	Cys	Leu	Gly	Asn	Cys	Ser	Gln	Pro	Asp	Asp	Pro	Thr	Lys	Cys		
			100					105					110				
Val	Ala	Cys	Arg	Asn	Phe	Tyr	Leu	Asp	Gly	Arg	Cys	Val	Glu	Thr	Cys		
		115					120					125					
Pro	Pro	Pro	Tyr	Tyr	His	Phe	Gln	Asp	Trp	Arg	Cys	Val	Asn	Phe	Ser		
		130				135						140					
Phe	Cys	Gln	Asp	Leu	His	His	Lys	Cys	Lys	Asn	Ser	Arg	Arg	Gln	Gly		
145					150					155					160		
Cys	His	Gln	Tyr	Val	Ile	His	Asn	Asn	Lys	Cys	Ile	Pro	Glu	Cys	Pro		
				165					170					175			
Ser	Gly	Tyr	Thr	Met	Asn	Ser	Ser	Asn	Leu	Leu	Cys	Thr	Pro	Cys	Leu		
			180					185					190				
Gly	Pro	Cys	Pro	Lys	Val	Cys	His	Leu	Leu	Glu	Gly	Glu	Lys	Thr	Ile		
		195					200					205					
Asp	Ser	Val	Thr	Ser	Ala	Gln	Glu	Leu	Arg	Gly	Cys	Thr	Val	Ile	Asn		
		210				215					220						
Gly	Ser	Leu	Ile	Ile	Asn	Ile	Arg	Gly	Gly	Asn	Asn	Leu	Ala	Ala	Glu		
225					230					235					240		
Leu	Glu	Ala	Asn	Leu	Gly	Leu	Ile	Glu	Glu	Ile	Ser	Gly	Tyr	Leu	Lys		
			245						250					255			
Ile	Arg	Arg	Ser	Tyr	Ala	Leu	Val	Ser	Leu	Ser	Phe	Phe	Arg	Lys	Leu		
			260					265					270				
Arg	Leu	Ile	Arg	Gly	Glu	Thr	Leu	Glu	Ile	Gly	Asn	Tyr	Ser	Phe	Tyr		
		275					280					285					
Ala	Leu	Asp	Asn	Gln	Asn	Leu	Arg	Gln	Leu	Trp	Asp	Trp	Ser	Lys	His		
		290				295					300						
Asn	Leu	Thr	Ile	Thr	Gln	Gly	Lys	Leu	Phe	Phe	His	Tyr	Asn	Pro	Lys		
305					310					315					320		
Leu	Cys	Leu	Ser	Glu	Ile	His	Lys	Met	Glu	Glu	Val	Ser	Gly	Thr	Lys		
			325						330					335			
Gly	Arg	Gln	Glu	Arg	Asn	Asp	Ile	Ala	Leu	Lys	Thr	Asn	Gly	Asp	Gln		
		340						345					350				
Ala	Ser	Cys	Glu	Asn	Glu	Leu	Leu	Lys	Phe	Ser	Tyr	Ile	Arg	Thr	Ser		
		355					360						365				
Phe	Asp																
	370																

<210> 105
 <211> 383
 <212> PRT

<213> Drosophila melanogaster

<400> 105

Arg	Gly	Gly	Val	Arg	Ile	Glu	Lys	Asn	His	Lys	Leu	Cys	Tyr	Asp	Arg
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Thr	Ile	Asp	Trp	Leu	Glu	Ile	Leu	Ala	Glu	Asn	Glu	Ser	Gln	Leu	Val
			20					25					30		
Val	Leu	Thr	Glu	Asn	Gly	Lys	Glu	Lys	Glu	Cys	Ser	Leu	Ser	Lys	Cys
		35					40					45			
Pro	Gly	Glu	Ile	Arg	Ile	Glu	Glu	Gly	His	Asp	Asn	Thr	Ala	Ile	Glu
	50					55				60					
Gly	Glu	Leu	Asn	Ala	Ser	Cys	Gln	Leu	His	Asn	Asn	Arg	Arg	Leu	Cys
65				70					75					80	
Trp	Asn	Ser	Lys	Leu	Cys	Gln	Thr	Lys	Cys	Pro	Glu	Lys	Cys	Arg	Asn
			85					90					95		
Asn	Cys	Ile	Asp	Glu	His	Thr	Cys	Cys	Ser	Gln	Asp	Cys	Leu	Gly	Gly
			100					105					110		
Cys	Val	Ile	Asp	Lys	Asn	Gly	Asn	Glu	Ser	Cys	Ile	Ser	Cys	Arg	Asn
		115					120				125				
Val	Ser	Phe	Asn	Asn	Ile	Cys	Met	Asp	Ser	Cys	Pro	Lys	Gly	Tyr	Tyr
	130				135						140				
Gln	Phe	Asp	Ser	Arg	Cys	Val	Thr	Ala	Asn	Glu	Cys	Ile	Thr	Leu	Thr
145					150					155					160
Lys	Phe	Glu	Thr	Asn	Ser	Val	Tyr	Ser	Gly	Ile	Pro	Tyr	Asn	Gly	Gln
				165					170					175	
Cys	Ile	Thr	His	Cys	Pro	Thr	Gly	Tyr	Gln	Lys	Ser	Glu	Asn	Lys	Arg
			180					185					190		
Met	Cys	Glu	Pro	Cys	Pro	Gly	Gly	Lys	Cys	Asp	Lys	Glu	Cys	Ser	Ser
		195				200						205			
Gly	Leu	Ile	Asp	Ser	Leu	Glu	Arg	Ala	Arg	Glu	Phe	His	Gly	Cys	Thr
	210				215						220				
Ile	Ile	Thr	Gly	Thr	Glu	Pro	Leu	Thr	Ile	Ser	Ile	Lys	Arg	Glu	Ser
225					230					235					240
Gly	Ala	His	Val	Met	Asp	Glu	Leu	Lys	Tyr	Gly	Leu	Ala	Ala	Val	His
				245					250					255	
Lys	Ile	Gln	Ser	Ser	Leu	Met	Val	His	Leu	Thr	Tyr	Gly	Leu	Lys	Ser
			260					265					270		
Leu	Lys	Phe	Phe	Gln	Ser	Leu	Thr	Glu	Ile	Ser	Gly	Asp	Pro	Pro	Met
		275				280						285			
Asp	Ala	Asp	Lys	Tyr	Ala	Leu	Tyr	Val	Leu	Asp	Asn	Arg	Asp	Leu	Asp
	290				295						300				
Glu	Leu	Trp	Gly	Pro	Asn	Gln	Thr	Val	Phe	Ile	Arg	Lys	Gly	Gly	Val
305					310					315					320
Phe	Phe	His	Phe	Asn	Pro	Lys	Leu	Cys	Val	Ser	Thr	Ile	Asn	Gln	Leu
				325					330					335	
Leu	Pro	Met	Leu	Ala	Ser	Lys	Pro	Lys	Phe	Phe	Glu	Lys	Ser	Asp	Glu
			340					345					350		
Gly	Ala	Asp	Ser	Asn	Gly	Asn	Arg	Gly	Ser	Cys	Gly	Thr	Ala	Val	Leu
	355					360						365			
Asn	Val	Thr	Leu	Gln	Ser	Val	Gly	Ala	Asn	Ser	Ala	Ser	Leu	Asn	
	370					375					380				

<210> 106

<211> 381

<212> PRT

<213> Caenorhabditis elegans

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1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
2	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	
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4	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100			
5	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90														

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<211> 370

<213> Homo sapiens

<400> 107

-57-

1					5					10					15				
Leu	Tyr	Val	Phe	His	Arg	Lys	Arg	Asn	Asn	Ser	Arg	Leu	Gly	Asn	Gly				
			20					25					30						
Val	Leu	Tyr	Ala	Ser	Val	Asn	Pro	Glu	Tyr	Phe	Ser	Ala	Ala	Asp	Val				
		35				40						45							
Tyr	Val	Pro	Asp	Glu	Trp	Glu	Val	Ala	Arg	Glu	Lys	Ile	Thr	Met	Ser				
	50					55					60								
Arg	Glu	Leu	Gly	Gln	Gly	Ser	Phe	Gly	Met	Val	Tyr	Glu	Gly	Val	Ala				
65					70					75						80			
Lys	Gly	Val	Val	Lys	Asp	Glu	Pro	Glu	Thr	Arg	Val	Ala	Ile	Lys	Thr				
				85					90					95					
Val	Asn	Glu	Ala	Ala	Ser	Met	Arg	Glu	Arg	Ile	Glu	Phe	Leu	Asn	Glu				
			100					105					110						
Ala	Ser	Val	Met	Lys	Glu	Phe	Asn	Cys	His	His	Val	Val	Arg	Leu	Leu				
		115					120					125							
Gly	Val	Val	Ser	Gln	Gly	Gln	Pro	Thr	Leu	Val	Ile	Met	Glu	Leu	Met				
	130					135					140								
Thr	Arg	Gly	Asp	Leu	Lys	Ser	Tyr	Leu	Arg	Ser	Leu	Arg	Pro	Glu	Met				
145					150					155					160				
Glu	Asn	Asn	Pro	Val	Leu	Ala	Pro	Pro	Ser	Leu	Ser	Lys	Met	Ile	Gln				
				165					170					175					
Met	Ala	Gly	Glu	Ile	Ala	Asp	Gly	Met	Ala	Tyr	Leu	Asn	Ala	Asn	Lys				
			180					185					190						
Phe	Val	His	Arg	Asp	Leu	Ala	Ala	Arg	Asn	Cys	Met	Val	Ala	Glu	Asp				
		195					200					205							
Phe	Thr	Val	Lys	Ile	Gly	Asp	Phe	Gly	Met	Thr	Arg	Asp	Ile	Tyr	Glu				
	210					215					220								
Thr	Asp	Tyr	Tyr	Arg	Lys	Gly	Gly	Lys	Gly	Leu	Pro	Val	Arg	Trp					
225					230					235				240					
Met	Ser	Pro	Glu	Ser	Leu	Lys	Asp	Gly	Val	Phe	Thr	Thr	Tyr	Ser	Asp				
				245					250					255					
Val	Trp	Ser	Phe	Gly	Val	Val	Leu	Trp	Glu	Ile	Ala	Thr	Leu	Ala	Glu				
			260					265					270						
Gln	Pro	Tyr	Gln	Gly	Leu	Ser	Asn	Glu	Gln	Val	Leu	Arg	Phe	Val	Met				
		275					280					285							
Glu	Gly	Gly	Leu	Leu	Asp	Lys	Pro	Asp	Asn	Cys	Pro	Asp	Met	Leu	Phe				
	290					295					300								
Glu	Leu	Met	Arg	Met	Cys	Trp	Gln	Tyr	Asn	Pro	Lys	Met	Arg	Pro	Ser				
305					310					315					320				
Phe	Leu	Glu	Ile	Ile	Ser	Ser	Ile	Lys	Glu	Glu	Met	Glu	Pro	Gly	Phe				
				325					330					335					

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<210> 108
<211> 374
<212> PRT
<213> Homo sapiens
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<400> 108
Ile Gly Pro Leu Ile Phe Val Phe Leu Phe Ser Val Val Ile Gly Ser
 1          5          10         15
Ile Tyr Leu Phe Leu Arg Lys Arg Gln Pro Asp Gly Pro Leu Gly Pro

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			20						25						30		
Leu	Tyr	Ala	Ser	Ser	Asn	Pro	Glu	Tyr	Leu	Ser	Ala	Ser	Asp	Val	Phe		
		35					40					45					
Pro	Cys	Ser	Val	Tyr	Val	Pro	Asp	Glu	Trp	Glu	Val	Ser	Arg	Glu	Lys		
	50					55					60						
Ile	Thr	Leu	Leu	Arg	Glu	Leu	Gly	Gln	Gly	Ser	Phe	Gly	Met	Val	Tyr		
65					70					75					80		
Glu	Gly	Asn	Ala	Arg	Asp	Ile	Ile	Lys	Gly	Glu	Ala	Glu	Thr	Arg	Val		
				85					90					95			
Ala	Val	Lys	Thr	Val	Asn	Glu	Ser	Ala	Ser	Leu	Arg	Glu	Arg	Ile	Glu		
			100					105					110				
Phe	Leu	Asn	Glu	Ala	Ser	Val	Met	Lys	Gly	Phe	Thr	Cys	His	His	Val		
		115					120					125					
Val	Arg	Leu	Leu	Gly	Val	Val	Ser	Lys	Gly	Gln	Pro	Thr	Leu	Val	Val		
	130					135					140						
Met	Glu	Leu	Met	Ala	His	Gly	Asp	Leu	Lys	Ser	Tyr	Leu	Arg	Ser	Leu		
145					150					155					160		
Arg	Pro	Glu	Ala	Glu	Asn	Asn	Pro	Gly	Arg	Pro	Pro	Pro	Thr	Leu	Gln		
				165					170					175			
Glu	Met	Ile	Gln	Met	Ala	Ala	Glu	Ile	Ala	Asp	Gly	Met	Ala	Tyr	Leu		
			180					185					190				
Asn	Ala	Lys	Lys	Phe	Val	His	Arg	Asp	Leu	Ala	Ala	Arg	Asn	Cys	Met		
		195					200					205					
Val	Ala	His	Asp	Phe	Thr	Val	Lys	Ile	Gly	Asp	Phe	Gly	Met	Thr	Arg		
	210					215					220						
Asp	Ile	Tyr	Glu	Thr	Asp	Tyr	Tyr	Arg	Lys	Gly	Gly	Lys	Gly	Leu	Leu		
225					230					235					240		
Pro	Val	Arg	Trp	Met	Ala	Pro	Glu	Ser	Leu	Lys	Asp	Gly	Val	Phe	Thr		
				245					250					255			
Thr	Ser	Ser	Asp	Met	Trp	Ser	Phe	Gly	Val	Val	Leu	Trp	Glu	Ile	Thr		
			260					265					270				
Ser	Leu	Ala	Glu	Gln	Pro	Tyr	Gln	Gly	Leu	Ser	Asn	Glu	Gln	Val	Leu		
		275					280					285					
Lys	Phe	Val	Met	Asp	Gly	Gly	Tyr	Leu	Asp	Gln	Pro	Asp	Asn	Cys	Pro		
	290				295						300						
Glu	Arg	Val	Thr	Asp	Leu	Met	Arg	Met	Cys	Trp	Gln	Phe	Asn	Pro	Lys		
305					310					315					320		
Met	Arg	Pro	Thr	Phe	Leu	Glu	Ile	Val	Asn	Leu	Leu	Lys	Asp	Asp	Leu		
				325					330					335			
His	Pro	Ser	Phe	Pro	Glu	Val	Ser	Phe	Phe	His	Ser	Glu	Glu	Asn	Lys		
			340					345					350				
Ala	Pro	Glu	Ser	Glu	Glu	Leu	Glu	Met	Glu	Phe	Glu	Asp	Met	Glu	Asn		
		355					360					365			</		

<210> 109

<211> 384

<212> PRT

<213> Drosophila melanogaster

<400> 109

Gly	Ile	Gly	Leu	Ala	Phe	Leu	Ile	Val	Ser	Leu	Phe	Gly	Tyr	Val	Cys
1				5					10					15	
Tyr	Leu	His	Lys	Arg	Lys	Val	Pro	Ser	Asn	Asp	Leu	His	Met	Asn	Thr
			20					25					30		
Glu	Val	Asn	Pro	Phe	Tyr	Ala	Ser	Met	Gln	Tyr	Ile	Pro	Asp	Asp	Trp

		35					40					45				
Glu	Val	Leu	Arg	Glu	Asn	Ile	Ile	Gln	Leu	Ala	Pro	Leu	Gly	Gln	Gly	
	50					55					60					
Ser	Phe	Gly	Met	Val	Tyr	Glu	Gly	Ile	Leu	Lys	Ser	Phe	Pro	Pro	Asn	
65					70					75					80	
Gly	Val	Asp	Arg	Glu	Cys	Ala	Ile	Lys	Thr	Val	Asn	Glu	Asn	Ala	Thr	
				85					90					95		
Asp	Arg	Glu	Arg	Thr	Asn	Phe	Leu	Ser	Glu	Ala	Ser	Val	Met	Lys	Glu	
				100					105					110		
Phe	Asp	Thr	Tyr	His	Val	Val	Arg	Leu	Leu	Gly	Val	Cys	Ser	Arg	Gly	
				115			120					125				
Gln	Pro	Ala	Leu	Val	Val	Met	Glu	Leu	Met	Lys	Lys	Gly	Asp	Leu	Lys	
	130					135					140					
Ser	Tyr	Leu	Arg	Ala	His	Arg	Pro	Glu	Glu	Arg	Asp	Glu	Ala	Met	Met	
145					150					155					160	
Thr	Tyr	Leu	Asn	Arg	Ile	Gly	Val	Thr	Gly	Asn	Val	Gln	Pro	Pro	Thr	
				165					170					175		
Tyr	Gly	Arg	Ile	Tyr	Gln	Met	Ala	Ile	Glu	Ile	Ala	Asp	Gly	Met	Ala	
			180					185					190			
Tyr	Leu	Ala	Ala	Lys	Lys	Phe	Val	His	Arg	Asp	Leu	Ala	Ala	Arg	Asn	
		195					200					205				
Cys	Met	Val	Ala	Asp	Asp	Leu	Thr	Val	Lys	Ile	Gly	Asp	Phe	Gly	Met	
	210					215					220					
Thr	Arg	Asp	Ile	Tyr	Glu	Thr	Asp	Tyr	Tyr	Arg	Lys	Gly	Thr	Lys	Gly	
225					230					235					240	
Leu	Leu	Pro	Val	Arg	Trp	Met	Pro	Pro	Glu	Ser	Leu	Arg	Asp	Gly	Val	
				245					250					255		
Tyr	Ser	Ser	Ala	Ser	Asp	Val	Phe	Ser	Phe	Gly	Val	Val	Leu	Trp	Glu	
			260					265					270			
Met	Ala	Thr	Leu	Ala	Ala	Gln	Pro	Tyr	Gln	Gly	Leu	Ser	Asn	Glu	Gln	
		275					280					285				
Val	Leu	Arg	Tyr	Val	Ile	Asp	Gly	Gly	Val	Met	Glu	Arg	Pro	Glu	Asn	
	290					295					300					
Cys	Pro	Asp	Phe	Leu	His	Lys	Leu	Met	Gln	Arg	Cys	Trp	His	His	Arg	
305					310					315					320	
Ser	Ser	Ala	Arg	Pro	Ser	Phe	Leu	Asp	Ile	Ile	Ala	Tyr	Leu	Glu	Pro	
				325					330					335		
Gln	Cys	Pro	Asn	Ser	Gln	Phe	Lys	Glu	Val	Ser	Phe	Tyr	His	Ser	Glu	
			340					345					350			
Ala	Gly	Leu	Gln	His	Arg	Glu	Lys	Glu	Arg	Lys	Glu	Arg	Asn	Gln	Leu	
		355					360					365				
Asp	Ala	Phe	Ala	Ala	Val	Pro	Leu	Asp	Gln	Asp	Leu	Gln	Asp	Arg	Glu	
	370					375					380					

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<210> 110
<211> 380
<212> PRT
<213> Caenorhabditis elegans
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-60-

50					55					60				
Gln	Cys	Gly	Glu	Gly	Ser	Phe	Gly	Lys	Val	Tyr	Leu	Gly	Thr	Gly
65					70					75				80
Asn	Val	Val	Ser	Leu	Met	Gly	Asp	Arg	Phe	Gly	Pro	Cys	Ala	Ile
				85					90					95
Ile	Asn	Val	Asp	Asp	Pro	Ala	Ser	Thr	Glu	Asn	Leu	Asn	Tyr	Leu
			100					105					110	
Glu	Ala	Asn	Ile	Met	Lys	Asn	Phe	Lys	Thr	Asn	Phe	Ile	Val	Gln
		115					120					125		
Tyr	Gly	Val	Ile	Ser	Thr	Val	Gln	Pro	Ala	Met	Val	Val	Met	Glu
	130				135					140				
Met	Asp	Leu	Gly	Asn	Leu	Arg	Asp	Tyr	Leu	Arg	Ser	Lys	Arg	Glu
145					150					155				160
Glu	Val	Phe	Asn	Glu	Thr	Asp	Cys	Asn	Phe	Phe	Asp	Ile	Ile	Pro
			165						170					175
Asp	Lys	Phe	His	Glu	Trp	Ala	Ala	Gln	Ile	Cys	Asp	Gly	Met	Ala
		180					185					190		Tyr
Leu	Glu	Ser	Leu	Lys	Phe	Cys	His	Arg	Asp	Leu	Ala	Ala	Arg	Asn
	195					200					205			Cys
Met	Ile	Asn	Arg	Asp	Glu	Thr	Val	Lys	Ile	Gly	Asp	Phe	Gly	Met
	210				215					220				Ala
Arg	Asp	Leu	Phe	Tyr	His	Asp	Tyr	Tyr	Lys	Pro	Ser	Gly	Lys	Arg
225					230					235				240
Met	Pro	Val	Arg	Trp	Met	Ser	Pro	Glu	Ser	Leu	Lys	Asp	Gly	Lys
			245					250						255
Asp	Ser	Lys	Ser	Asp	Val	Trp	Ser	Phe	Gly	Val	Val	Leu	Tyr	Glu
			260					265					270	Met
Val	Thr	Leu	Gly	Ala	Gln	Pro	Tyr	Ile	Gly	Leu	Ser	Asn	Asp	Glu
	275						280					285		Val
Leu	Asn	Tyr	Ile	Gly	Met	Ala	Arg	Lys	Val	Ile	Lys	Lys	Pro	Glu
	290				295					300				Cys
Cys	Glu	Asn	Tyr	Trp	Tyr	Lys	Val	Met	Lys	Met	Cys	Trp	Arg	Tyr
305					310					315				320
Pro	Arg	Asp	Arg	Pro	Thr	Phe	Leu	Gln	Leu	Val	His	Leu	Leu	Ala
			325						330					335
Glu	Ala	Ser	Pro	Glu	Phe	Arg	Asp	Leu	Ser	Phe	Val	Leu	Thr	Asp
		340					345						350	Asn
Gln	Met	Ile	Leu	Asp	Asp	Ser	Glu	Ala	Leu	Asp	Leu	Asp	Asp	Ile
	355					360						365		Asp
Asp	Thr	Asp	Met	Asn	Asp	Gln	Val	Val	Glu	Val	Ala			
	370				375						380			

<210> 111
 <211> 103
 <212> PRT
 <213> Caenorhabditis elegans

<400> 111
 Asn Ile Asp Arg Glu Phe Asp Gln Lys Ala Cys Glu Ser Leu Val Lys
 1 5 10 15
 Lys Leu Lys Asp Lys Lys Asn Asp Leu Gln Asn Leu Ile Asp Val Val
 20 25 30
 Leu Ser Lys Gly Thr Lys Tyr Thr Gly Cys Ile Thr Ile Pro Arg Thr
 35 40 45
 Leu Asp Gly Arg Leu Gln Val His Gly Arg Lys Gly Phe Pro His Val
 50 55 60
 Val Tyr Gly Lys Leu Trp Arg Phe Asn Glu Met Thr Lys Asn Glu Thr

65 70 75 80
 Arg His Val Asp His Cys Lys His Ala Phe Glu Met Lys Ser Asp Met
 85 90 95
 Val Cys Val Asn Pro Tyr His
 100

<210> 112
 <211> 104
 <212> PRT
 <213> Homo sapiens

<400> 112
 Gly Gly Glu Ser Glu Thr Phe Ala Lys Arg Ala Ile Glu Ser Leu Val
 1 5 10 15
 Lys Lys Leu Lys Glu Lys Lys Asp Glu Leu Asp Ser Leu Ile Thr Ala
 20 25 30
 Ile Thr Thr Asn Gly Ala His Pro Ser Lys Cys Val Thr Ile Gln Arg
 35 40 45
 Thr Leu Asp Gly Arg Leu Gln Val Ala Gly Arg Lys Gly Phe Pro His
 50 55 60
 Val Ile Tyr Ala Arg Leu Trp Arg Trp Pro Asp Leu His Lys Asn Glu
 65 70 75 80
 Leu Lys His Val Lys Tyr Cys Gln Tyr Ala Phe Asp Leu Lys Cys Asp
 85 90 95
 Ser Val Cys Val Asn Pro Tyr His
 100

<210> 113
 <211> 205
 <212> PRT
 <213> Caenorhabditis elegans

<400> 113
 Ile Val Tyr Tyr Glu Lys Asn Leu Gln Ile Gly Glu Lys Lys Cys Ser
 1 5 10 15
 Arg Gly Asn Phe His Val Asp Gly Gly Phe Ile Cys Ser Glu Asn Arg
 20 25 30
 Tyr Ser Leu Gly Leu Glu Pro Asn Pro Ile Arg Glu Pro Val Ala Phe
 35 40 45
 Lys Val Arg Lys Ala Ile Val Asp Gly Ile Arg Phe Ser Tyr Lys Lys
 50 55 60
 Asp Gly Ser Val Trp Leu Gln Asn Arg Met Lys Tyr Pro Val Phe Val
 65 70 75 80
 Thr Ser Gly Tyr Leu Asp Glu Gln Ser Gly Gly Leu Lys Lys Asp Lys
 85 90 95
 Val His Lys Val Tyr Gly Cys Ala Ser Ile Lys Thr Phe Gly Phe Asn
 100 105 110
 Val Ser Lys Gln Ile Ile Arg Asp Ala Leu Leu Ser Lys Gln Met Ala
 115 120 125
 Thr Met Tyr Leu Gln Gly Lys Leu Thr Pro Met Asn Tyr Ile Tyr Glu
 130 135 140
 Lys Lys Thr Gln Glu Glu Leu Arg Arg Glu Ala Thr Arg Thr Thr Asp
 145 150 155 160
 Ser Leu Ala Lys Tyr Cys Cys Val Arg Val Ser Phe Cys Lys Gly Phe
 165 170 175
 Gly Glu Ala Tyr Pro Glu Arg Pro Ser Ile His Asp Cys Pro Val Trp

		180					185			190
Ile	Glu	Leu	Lys	Ile	Asn	Ile	Ala	Tyr	Asp	Phe
		195					200			Met
										Asp
										205

<210> 114
 <211> 212
 <212> PRT
 <213> Homo sapiens

<400> 114

Ile	Ala	Tyr	Phe	Glu	Met	Asp	Val	Gln	Val	Gly	Glu	Thr	Phe	Lys	Val
1				5					10					15	
Pro	Ser	Ser	Cys	Pro	Ile	Val	Thr	Val	Asp	Gly	Tyr	Val	Asp	Pro	Ser
			20					25					30		
Gly	Gly	Asp	Arg	Phe	Cys	Leu	Gly	Gln	Leu	Ser	Asn	Val	His	Arg	Thr
		35					40					45			
Glu	Ala	Ile	Glu	Arg	Ala	Arg	Leu	His	Ile	Gly	Lys	Gly	Val	Gln	Leu
	50					55					60				
Glu	Cys	Lys	Gly	Glu	Gly	Asp	Val	Trp	Val	Arg	Cys	Leu	Ser	Asp	His
65					70				75					80	
Ala	Val	Phe	Val	Gln	Ser	Tyr	Tyr	Leu	Asp	Arg	Glu	Ala	Gly	Arg	Ala
				85					90					95	
Pro	Gly	Asp	Ala	Val	His	Lys	Ile	Tyr	Pro	Ser	Ala	Tyr	Ile	Lys	Val
			100					105					110		
Phe	Asp	Leu	Arg	Gln	Cys	His	Arg	Gln	Met	Gln	Gln	Gln	Ala	Ala	Thr
		115					120					125			
Ala	Gln	Ala	Ala	Ala	Ala	Ala	Gln	Ala	Ala	Ala	Val	Ala	Gly	Asn	Ile
	130					135					140				
Pro	Gly	Pro	Gly	Ser	Val	Gly	Gly	Ile	Ala	Pro	Ala	Ile	Ser	Leu	Ser
145					150				155					160	
Ala	Ala	Ala	Gly	Ile	Gly	Val	Asp	Asp	Leu	Arg	Arg	Leu	Cys	Ile	Leu
				165					170					175	
Arg	Met	Ser	Phe	Val	Lys	Gly	Trp	Gly	Pro	Asp	Tyr	Pro	Arg	Gln	Ser
			180					185					190		
Ile	Lys	Glu	Thr	Pro	Cys	Trp	Ile	Glu	Ile	His	Leu	His	Arg	Ala	Leu
		195					200					205			
Gln	Leu	Leu	Asp												
															210